

**5.3.13 SIHP #50-80-14-7425**

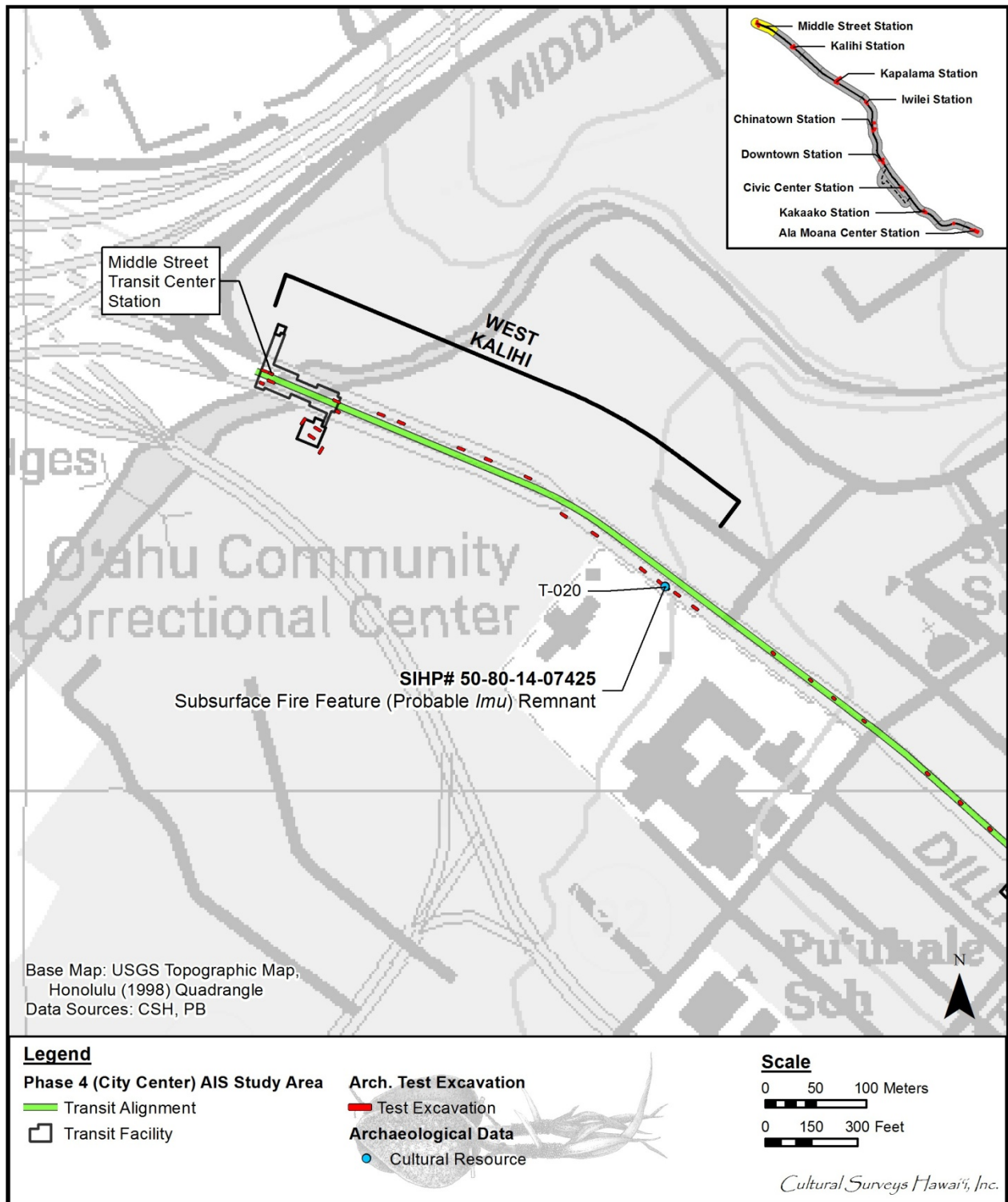
<b>FORMAL TYPE:</b>	Subsurface fire feature remnant (interpreted as the remains of a single <i>imu</i> or earth oven)
<b>FUNCTION:</b>	Cooking
<b>AGE:</b>	Pre-Contact
<b>NUMBER OF FEATURES:</b>	N/A
<b>TYPES OF FEATURES:</b>	N/A
<b>DISTRIBUTION:</b>	Point feature in T-020. Observed dimensions within T-020 were about 90 cm in length and 10 cm in thickness
<b>LOCATION:</b>	Located in the right lane of the eastbound lanes of Kamehameha Highway (West Kalihi Geographic Zone)
<b>TAX MAP KEY:</b>	Kamehameha Highway ROW, TMK [1] 1-2-013
<b>LAND JURISDICTION:</b>	City and County of Honolulu
<b>TEST EXCAVATIONS:</b>	T-020

SIHP #50-80-14-7425 consists of a single feature identified as a pronounced lens of wood charcoal and water-rounded, fist-sized basalt cobbles. It was located in the Kamehameha Highway Right-of-Way, approximately 60 m southwest of the Laumaka Street intersection in the easternmost section of the West Kalihi Geographic Zone (Figure 323). This feature was discovered within Test Excavation 20 (T-020) during subsurface testing for the City Center AIS (see Volume IVA). It clearly represents the remains of a human-induced fire feature (e.g. hearth, firepit, or earth oven). Based on available evidence, the feature is interpreted as the remains of a traditional Hawaiian *imu* (earth oven).

SIHP #7425 is located between 2.35 and 2.50 mbs within Stratum II, a thick, naturally-deposited silty clay loam alluvium (Figure 324 and Table 66). T-020 sectioned a portion of this shallow, bowl-shaped feature and all interpretation is based on the documentation and sampling of this exposed feature section. The exposed section measures 0.90 m in length, 0.10 m in thickness, and contained a 0.10-m thick dense lens of charcoal. Sampling of the exposed section yielded 11 fist-sized, reddish colored water-rounded basalt cobbles (Figure 325 and Figure 326). These uniformly-sized cobbles clearly related to the construction and use of the feature as the surrounding fine-grained alluvium contained no water-rounded basalt cobbles. Additionally, the presence of the cobbles amid the dense charcoal lens and the fire-reddened appearance of most of the cobbles indicates they were central components of the feature's use.

Although dimensions of the exposed feature section (length and width) were measured, this exposed section may not represent the overall diameter of the feature. The feature clearly extended beyond the northeast sidewall of T-020. Field observations indicated that more charcoal and fire-reddened basalt stones likely extended beyond the T-020 sidewall.

In general, the depositional sequence within T-020 reflects a change from natural sediments deposited along a broad coastal alluvial plain, to the fill and base course materials associated with later developments. Originally used for marine resource cultivation, occasional house sites, and agricultural activities, the coastal areas of Kalihi Ahupua'a (and much of the formal Kalihi area) experienced expanding development and urbanization by the early 20th century. This



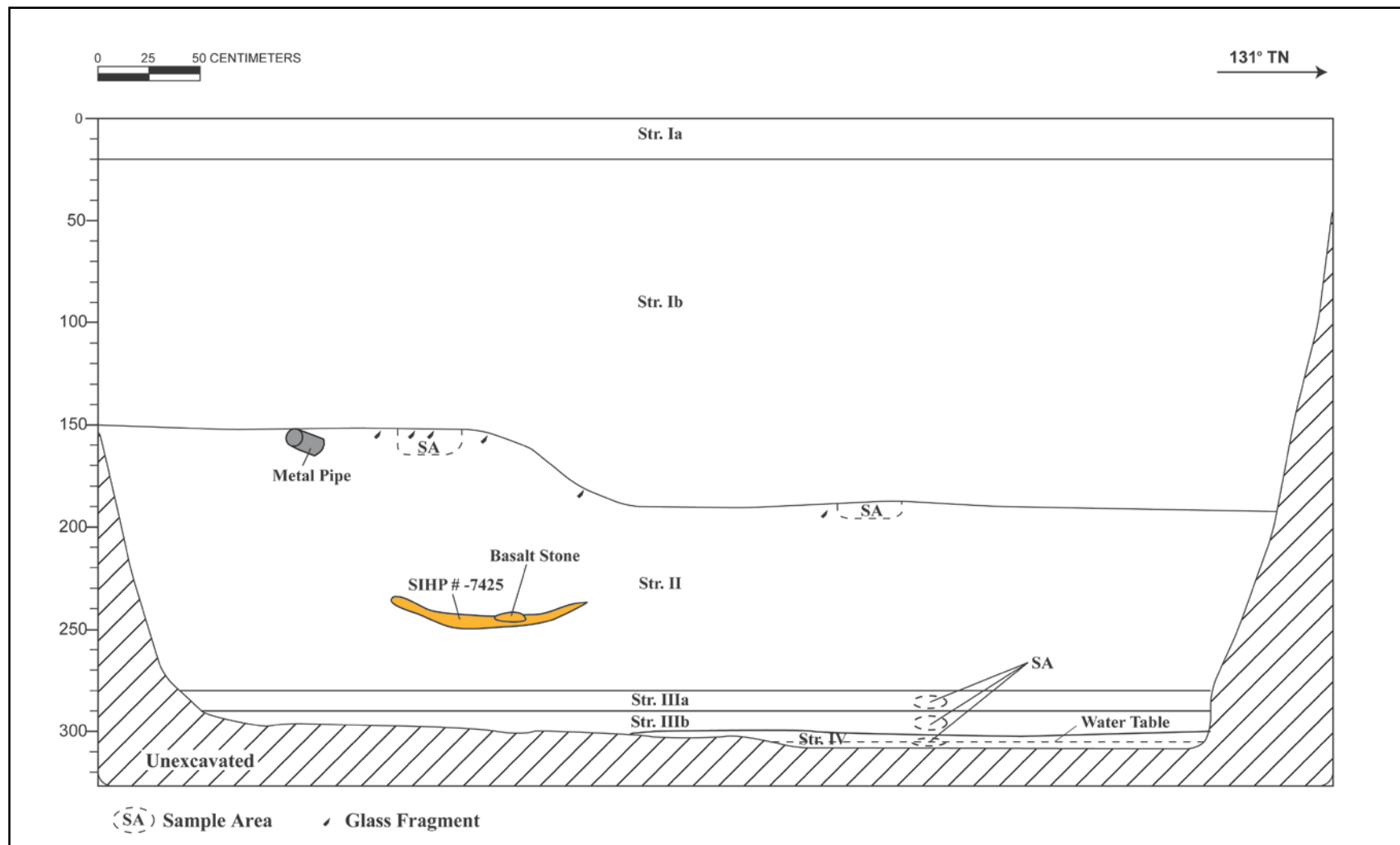


Figure 324. T-020 northeast wall profile showing the subsurface probable *imu* (SIHP #-7425)

Table 66. T-020 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-20	Asphalt; road surface
Ib	20-195	Fill; 10 YR 7/4 (very pale brown); extremely gravelly cobbly sand; structureless, single-grain, coarse; dry, very hard consistency; non-plastic; marine origin; abrupt lower boundary; imported crushed coral fill consisting of gravel and cobbles
II	150-280	Natural; 10 YR 4/2 (dark grayish brown); silty clay loam; weak, very fine, blocky structure; moist, firm consistency; plastic; terrigenous origin; contains moderate charcoal flecking. Glass fragments observed and collected from the upper portion of this layer, also a metal pipe fragment; contained fire feature (probable <i>imu</i> ) between 2.35 and 2.50 mbs; designated as SIHP # 7425
IIIa	280-290	Natural; 2.5 YR 4/2 (dark grayish brown); gravelly clay loam; structureless, massive; moist, friable consistency; plastic; mixed origin; clear, smooth lower boundary; few, fine roots
IIIb	290-300	Natural; 2.5 YR 4/2 (dark grayish brown); clay loam; structureless, massive, moist, friable consistency; plastic; mixed origin; clear, smooth lower boundary; few, fine roots
IV	300-310	Natural; 10 YR 7/4 (very pale brown); cobbles and gravels; structureless, massive; moist, extremely firm consistency; non-plastic; marine origin; lower boundary not visible; decomposing coral shelf



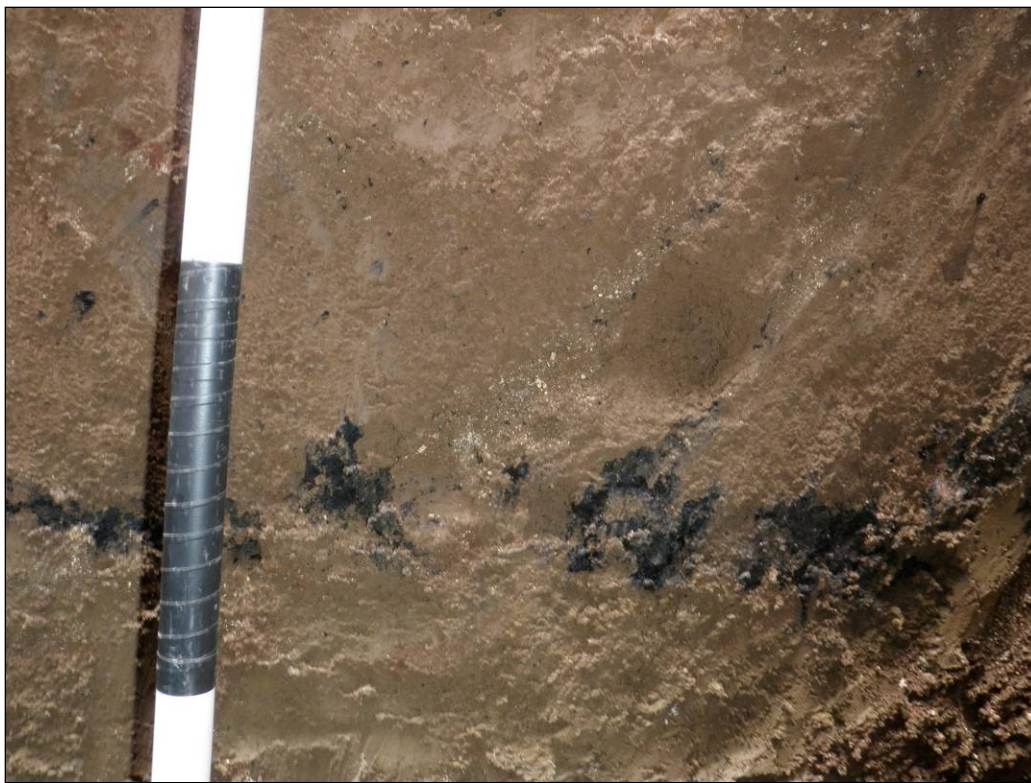


Figure 325. Close-up photograph of T-020 northeast wall, showing charcoal within probable *imu* (SIHP # -7425)



Figure 326. Water-rounded basalt cobbles collected from probable *imu* (SIHP # -7425) in T-020

period of development, particularly during the construction of Kamehameha Highway, may have disturbed or reworked the upper most natural sediments (Stratum II) and introduced historic materials into the upper portion of Stratum II.

Four natural sediments were observed beginning from 1.50 mbs and extending to the base of excavation at 3.10 mbs. The lowest stratum was Stratum IV, the buried late Pleistocene calcareous reef (coral reef). Overlying the coral shelf was Stratum IIIb, a natural clay loam sediment. Above Stratum IIIb was Stratum IIIa, a gravelly clay loam deposit. SIHP #-7425 was observed in Stratum II, a natural silty clay loam. Historic material was observed only near the upper boundary of Stratum II and not within the lower portions of Stratum II. No historic material occurred in the samples collected from the probable *imu* (SIHP #-7425), or in the exposed sediments surrounding SIHP #-7425.

Two fill layers overlay the natural sediments (Strata Ia and Ib). Stratum Ia was the current asphalt road surface and Stratum Ib was a thick sequence of crushed coral base course. Both fill sediments correlate with construction of the current Kamehameha Highway.

A total of six bulk sediment samples were collected from T-020. One sample each was collected from Strata IIIa, IIIb, and IV. Two were collected from Stratum II and one from the probable *imu* (SIHP #-7425). No significant finds were recovered from Strata IIIa, IIIb, or IV.

The Stratum II samples consisted of one collected between 1.55-1.70 mbs and a second from 1.83-1.93 mbs (see Figure 324). The sample from 1.55–1.70 mbs contained clear and green glass bottle fragments (1.8 g), two coke bottle fragments (61.0 g), organics (0.1 g), non-cultural shell (0.3 g), and water-rounded gravels. The sample from 1.83-1.93 contained terrestrial snails (0.9 g), Tellinidae (1.1 g), glass fragments (<0.1 g), fish remains (0.1 g), and water-rounded gravels.

SIHP #-7425 was sampled between 2.35-2.50 mbs. The sample yielded substantial charcoal (119.2 g). Wood taxa analyses of the charcoal identified the following five species of Native Hawaiian trees and shrubs: *Lama* (*Diospyros sandiwiensis*), *Akoko* (*Chamaesyce* sp.), 'A'ali'i (cf. *Dodonaea viscosa*), 'Ūlei (cf. *Osteomeles anthyllidifolia*), and *Hō'awa* (cf. *Pittosporum* sp.). The *Lama* is a small endemic tree and its wood was often used by the native Hawaiians for houses (Pukui and Elbert 1986:192), enclosures for idols (Malo 1951:21), chisel handles (Buck 1957:38), and as offerings (Rock 1974:395). 'Akoko is an endemic shrub and small tree that was highly valued as firewood (Hillebrand 1888:396). 'A'ali'i is an indigenous shrub or small tree that produced a hard wood often used for digging sticks, house posts, and weapons (Abbott 1992:68; Krauss 1993:56; Lamb 1981:78). 'Ūlei is an indigenous woody shrub to small tree used for a variety items, including digging sticks, spears, and scoop-net handles (Neal 1965:387). *Hō'awa* is an endemic small tree that was used for medicinal purposes to ward off evil spirits (Ka'aiakamanu and Chun 2003). The presence of only native and Polynesian-introduced species in the charcoal samples indicates that the charcoal within the probable *imu* likely predates post-Contact introductions of alien woody plants.

The 'Ūlei charcoal was submitted for radiocarbon analysis which yielded two possible date ranges, with a calibrated 2-sigma date of AD 1440 to AD 1530 (61.6%) being the most probable. Radiocarbon results indicate that the dated charcoal material from SIHP #-7425 is pre-Contact in age. The probable *imu* was constructed and used in the sixteenth century.

Based on morphology and content SIHP #-7425 is consistent with a cooking function and the shape and contents of the feature appear consistent with Hartzell and McPherron's (1997:223) definition of an *imu*:

“...a pit with the following characteristics: diameter of at least a meter, substantial amount of charcoal, substantial amount of fire-affected rock (usually in cobble to small boulder range), and burned earth lining. An *imu* can have a variety of profile shapes, the most common being bowl-shaped...Artifacts may or may not be present.”

David Malo (1951:110) similarly describes the traditional Hawaiian *imu* as a hollow in the ground that was lined with stones. Food placed in the *imu* was often covered with leaves and *tapa*. Buck (1964:18-19) relates that *imu* were shallow holes and that building an *imu* involved placing kindling wood in the center of the hole with larger pieces of wood built up around the kindling. Stones would be placed over the wood before lighting the kindling. Stones are described as being the “size of a closed fist” and should be of material which would not fracture upon heating. Food was typically covered with layers of leaves or old mats and *tapas* for protection from the heat.

SIHP #-7425 has characteristics often attributed to traditional Hawaiian *imu*. The observed feature section exhibits a shallow bowl shape that contained charcoal and fire-affected stones; the feature also likely extended some distance into the northeastern sidewall. The total dimensions and shape of SIHP #-7425 is unknown. As such the feature may be smaller in extent than a traditional Hawaiian *imu*, nor can we rule out the possibility it represents the remains of a hearth or firepit. However, from the descriptions of traditional *imu*, results of radiocarbon and wood taxa analysis, and the abundant charcoal (119.2 g) and fire-affected basalt cobbles collected from the feature, SIHP #-7425 is interpreted as a probable *imu* used for cooking activities during pre-Contact habitation of the coastal areas within Kalihi Ahupua'a.

Based on the guidance of the National Register Bulletin No.15, SIHP #50-80-14-7425 retains its integrity of location, design, materials, and workmanship. Based on the results of this investigation, CSH recommends that this cultural resource maintains sufficient integrity to support its historic significance under Criterion D (has yielded, or is likely to yield information important for research on prehistory or history) of the Hawai'i and National Register, exclusively for its information potential.

SIHP #-7425 has provided information, and has potential to provide additional information, on pre-Contact land use within the Kalihi Ahupua'a. Archaeological monitoring is recommended for SIHP #-7425 to recover additional data on the probable *imu* feature, and to mitigate potential impacts to SIHP #-7425 during construction. Should SIHP #-7425 be encountered during monitoring, additional mapping and sampling will be conducted to further assess feature size, morphology, content, and function.

**5.3.14 SIHP #50-80-14-7426**

<b>FORMAL TYPE:</b>	Subsurface wetland deposit
<b>FUNCTION:</b>	Agriculture
<b>PREVIOUS DOCUMENTATION:</b>	Pammer and Monahan (2011); Tulchin and Hammatt (2013); Medina et al. (2013)
<b>AGE:</b>	Pre- and post-Contact
<b>NUMBER OF FEATURES:</b>	N/A
<b>TYPES OF FEATURES:</b>	N/A
<b>DISTRIBUTION:</b>	2.47 acres (within current project area), approximately 24.81 acres (total interpolated area)
<b>LOCATION:</b>	Along Dillingham Boulevard between Waiakamilo Road to near Ka'aahi Street (East Kapālāma Geographic Zone)
<b>TAX MAP KEYS:</b>	[1] 1-5-015, [1] 1-5-015:008, [1] 1-5-017, [1] 1-5-017:006, [1] 1-5-020, [1] 1-5-020:003, and 1-5-022 (within current project area); [1] 1-5-022:001 and 002 (Pammer and Monahan 2011); [1] 1-5-022 003-006, 008, 010, 011, [1] 1-5-03:001 and 002, and [1] 1-5-019:001-09 (Tulchin and Hammatt 2013); [1] 1-5-020 (Medina et al. 2013)
<b>LAND JURISDICTION:</b>	City and County of Honolulu, Bishop Estate, the University of Hawai'i, and DTC Investments LLC (within current project area); Kamehameha Schools (Pammer and Monahan 2011 and Tulchin and Hammatt 2013); City and County of Honolulu (Medina et al. 2013)
<b>TEST EXCAVATIONS:</b>	T-054 through T-082

SIHP #50-80-14-7426 is a previously-identified subsurface wetland deposit that spans most of the East Kapālāma Geographic Zone between two raised Pleistocene limestone shelves (Figure 327). This archaeological cultural resource was first assigned an SIHP number during the current City Center AIS. However, it appears that Pammer and Monahan (2011), Tulchin and Hammatt (2013), and Medina et al. (2013) have identified the same cultural resource within their study areas. Pammer and Monahan (2011) documented buried wetland sediments that showed evidence of having been used for agriculture, but did not designate them as a historic property. Tulchin and Hammatt (2013) and Medina et al. (2013) are ongoing projects that have documented similar buried wetland deposits. The wetland deposits from those three studies have been incorporated into this cultural resource description and into the interpolated boundaries of SIHP #-7426 shown in Figure 327.

E. S. Craighill Handy, who gathered information on former planting areas from local informants in the 1930s and 1940s, reported the following:

Kapalama had two streams watering its terrace area [for taro], which was almost continuous from Iwilei up to the foothills above School Street, an area measuring about three quarters of a mile both in depth inland and in breadth [Handy 1940:79].



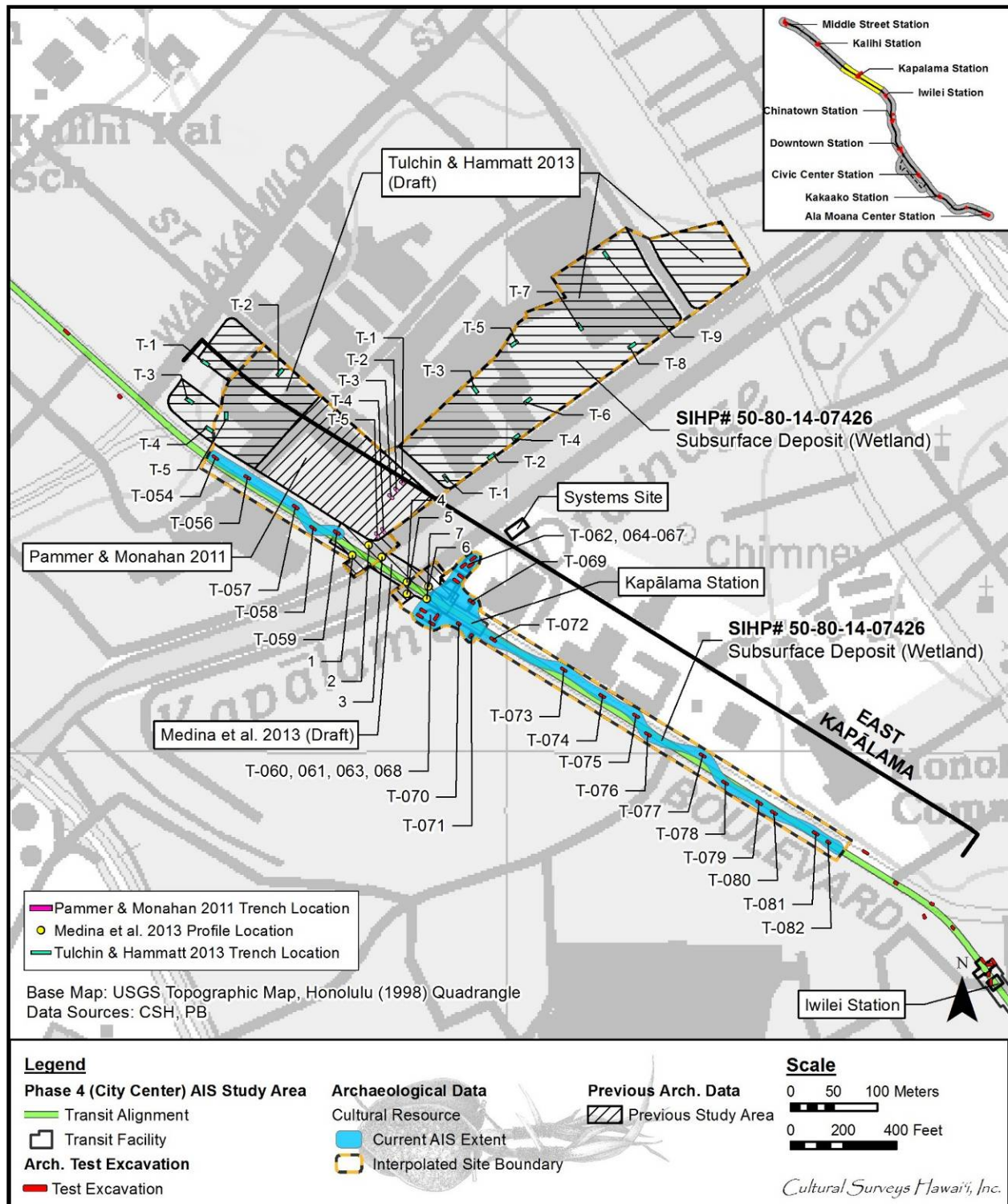


Figure 327. Location of the subsurface wetland deposits (SIHP # 7426) and previous archaeological studies in the East Kapālama Geographic Zone (base map: USGS 1998 Topographic Map of Honolulu Quadrangle)

The 1855 LaPasse map (Figure 328) also indicates that this area was extensive “champs de taro” (taro fields).

In 2011, CSH completed a limited subsurface testing program for the Kapālama Shopping Center Redevelopment Project (Pammer and Monahan 2011) located immediately adjacent to and *mauka* of the City Center AIS project corridor (see Figure 327). During this study, Pammer and Monahan (2011) documented *lo'i* sediments in all five of their test excavations at depths ranging from 1.85 to 2.40 mbs, with an average upper boundary of 2.03 mbs. The *lo'i* deposits were located beneath multiple fill layers at and below the water table and were represented primarily by very dark terrestrial clay containing decomposing organic material. Wet screening of the natural sediments did not reveal cultural material or evidence of human occupation, although LCA documents indicated that the area was previously cultivated with taro *lo'i* and contained house lots and ponds (Pammer and Monahan 2011:98). Although Pammer and Monahan (2011) did not designate the *lo'i* sediments as an historic property, they are included within SIHP #-7426 in this current City Center AIS study based on similarities of sediment composition and location.

The general stratigraphic sequence documented by Pammer and Monahan (2011) consisted of the coral shelf underneath clay *lo'i* sediments (SIHP #-7426), followed by varying layers of fill associated with the different periods of development within the project area, followed by a base course layer (not always present) and an existing paved asphalt parking lot (Figure 329, Figure 330, and Table 67).

Similar deposits were observed during ongoing subsurface testing for Kamehameha Schools (Tulchin and Hammatt 2013) *mauka* of the City Center AIS project area and adjacent to the Pammer and Monahan (2011) study (see Figure 327). Tulchin and Hammatt (2013) identified both the former land surface, consisting of wetland deposits, and a limestone bedrock ridge (the Pleistocene shelf). Eleven of their 13 test excavations were located within the boundary of SIHP #-7426, in the former low-lying wetlands between the Pleistocene limestone shelves. The remaining two test excavations were located on the westernmost Pleistocene shelf.

The general stratigraphic sequence of the lowland wetland area documented by Tulchin and Hammatt (2013) consisted of naturally deposited clay wetland sediments (SIHP #-7426) underlying multiple thick fill deposits (Figure 331, Figure 332 and Table 68). The fill deposits are associated with intensive land reclamation activities in which low-lying wetland areas were filled in to create stable level surfaces for urban development (Tulchin and Hammatt 2013:89). In all but one case, excavation ceased at the water table and the coral shelf was not encountered.

The documented wetland sediments consisted primarily of dark alluvial clay observed at depths ranging from 1.60 to 2.75 mbs, with an average upper boundary of 1.97 mbs. Freshwater snails, organics, and charcoal flecking were observed in the wetland deposits. Tulchin and Hammatt (2013:89, 129) suggested that the wetland deposits “were utilized by pre-Contact Hawaiians for the cultivation of taro and then utilized by post-Contact populations for the cultivation of rice.”

Medina et al. (2013), also documented a wetland deposit associated with SIHP #-7426 during archaeological monitoring for traffic control signal improvements along Dillingham Boulevard on both sides of Kapālama Canal (within the City Center AIS corridor) (see Figure 327).



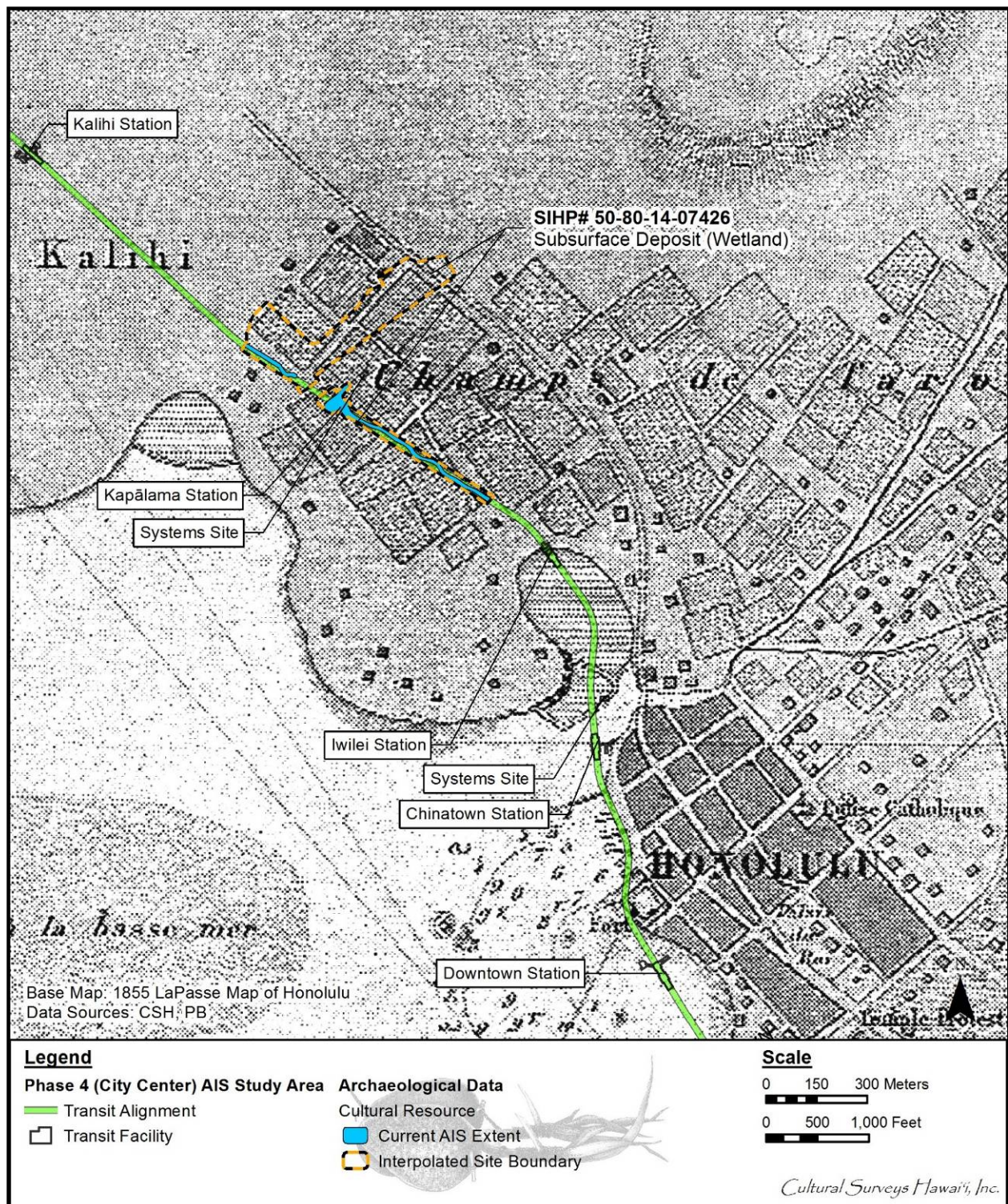


Figure 328. 1855 map of Honolulu by Lt. Joseph de LaPasse of the French vessel, *L'Eurydice* (map reprinted in Fitzpatrick 1986:82-83), showing the “*Champs de Taro*” (taro fields) of East Kapālama with an overlay of SIHP #7426



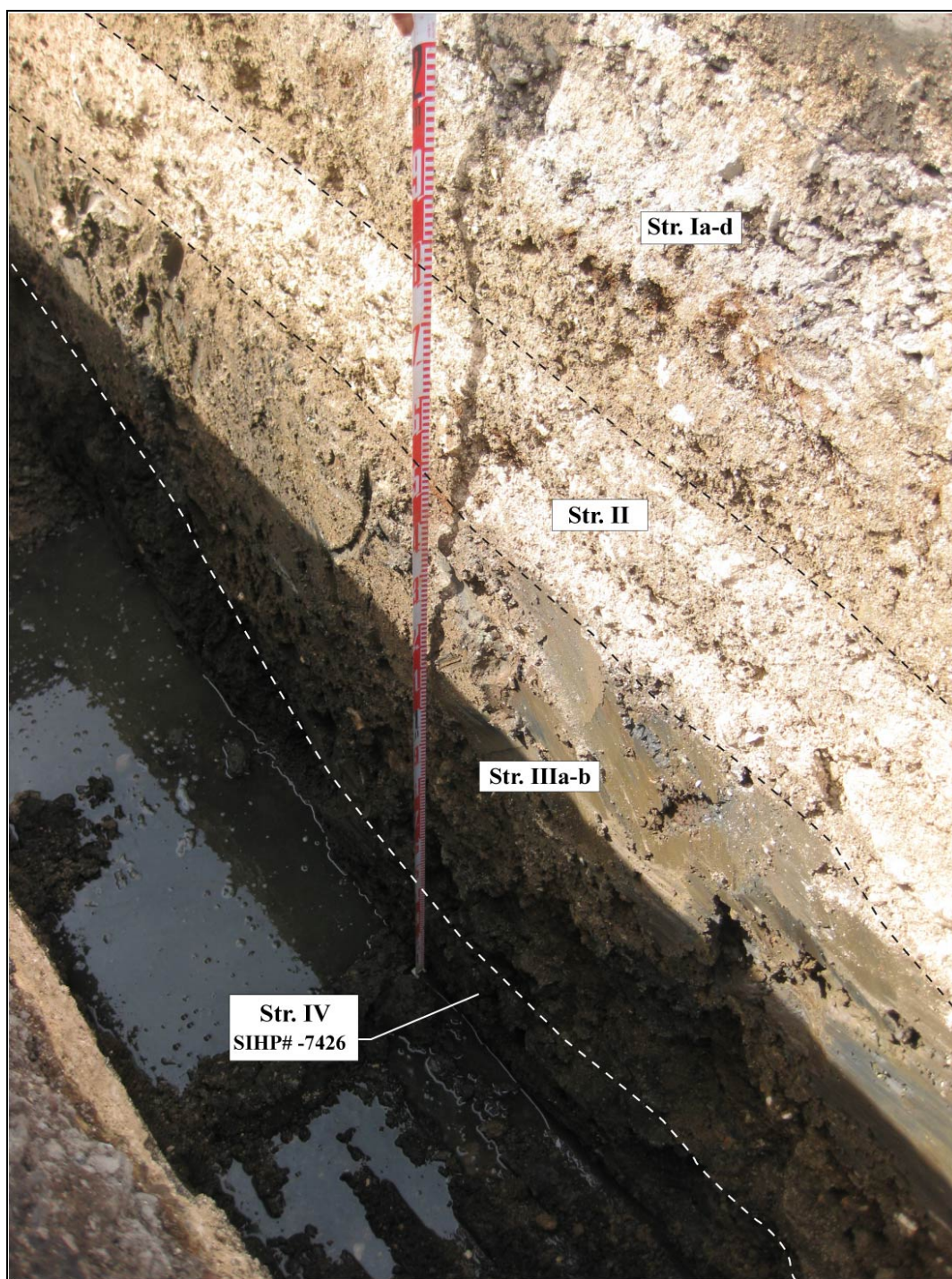


Figure 329. Pammer and Monahan (2011:95; labels not in original) Test Trench 5 northwest wall, showing wetland deposit (SIHP # -7426) beneath fill strata, view to north



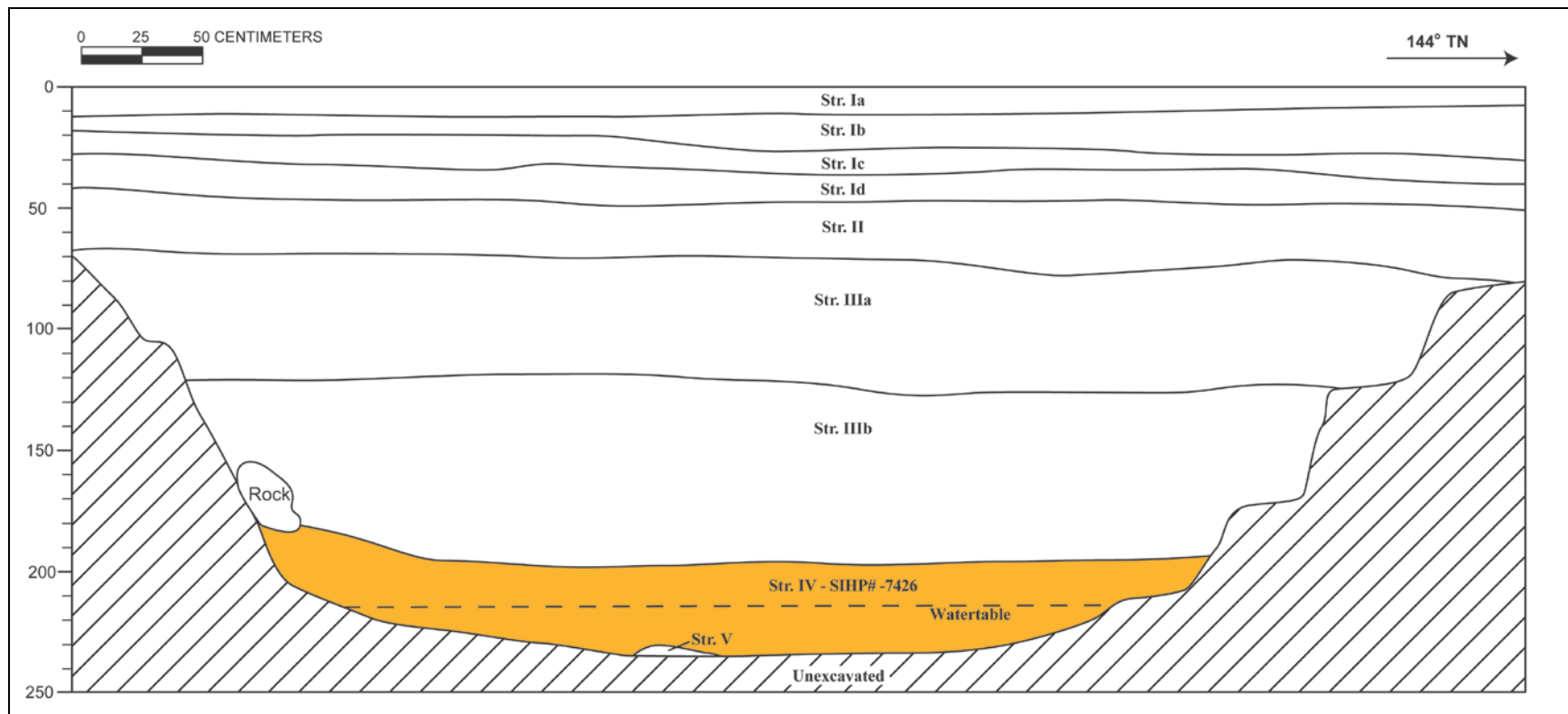


Figure 330. Pammer and Monahan (2011:94; color and SIHP #-7426 not in original) Trench 5 northwest wall profile, showing wetland deposit (Stratum IV, SIHP #-7426)

Table 67. Trench 5 Stratigraphic Summary (adapted from Pammer and Monahan 2011)

Stratum	Depth (cmbs)	Description
Ia	0-13	Asphalt; 10 YR 2/1 black; structureless (massive); extremely hard dry consistency; indurated cementation; non-plastic; terrigenous origin; very abrupt, smooth lower boundary; surfacing for parking lot
Ib	10-30	Fill; 5 YR 4/4 reddish brown, gravel; moderate, medium, blocky structure; moist, friable consistency; weak cementation; non-plastic; terrigenous origin; clear, smooth lower boundary; basalt gravel base course
Ic	20-35	Fill; 10 YR 3/4 dark yellowish brown, clay loam; moderate, medium, blocky structure; moist, friable consistency; weak cementation; slightly plastic; terrigenous origin; clear, smooth lower boundary; imported fill
Id	30-50	Fill; 10 YR 5/4 yellowish brown, crushed coral; structureless; dry, weakly coherent consistency; weak cementation; non-plastic; mixed origin; abrupt, smooth lower boundary; imported crushed coral fill
II	40-80	Fill; 10 YR 7/3 very pale brown, crushed coral; structureless; dry, hard consistency; strong cementation; non-plastic; marine origin; abrupt, smooth lower boundary; imported crushed coral fill
IIIa	67-215	Fill; 10 YR 4/3 brown, clay; moderate, coarse, blocky structure; moist, friable consistency; weak cementation; plastic; mixed origin; abrupt, wavy lower boundary; mixed imported clay fill
IIIb	120-200	Fill; 10 YR 3/1 very dark gray, gravelly clay; weak, medium, blocky structure; moist, friable, firm consistency; no cementation; plastic; mixed origin; clear, smooth lower boundary. Similar to stratum IIIa. Loose and gravelly with modern debris including an aquamarine glass bottle. A multitude of branch coral fragments observed within this layer, mixed in with the reddish brown clay and trash
IV	185-235	10 YR 2/1 black, clay; moderate, fine, blocky structure; wet, sticky consistency; weak cementation; slightly plastic; mixed origin; diffuse, smooth lower boundary. Very dark <i>lo'i</i> sediments, located at the water table. Clay is similar to the marine clay typically overlying the coral shelf within the nearby Kaka'ako area, but is darker with a higher organic content. This clay is likely primarily terrestrial, associated with the nearby stream; wetland deposit; component of SIHP #-7426
V	230-235 (BOE)	10 YR 6/3 pale brown, crumbly coral shelf; weak, medium, blocky structure; wet, non-sticky consistency; weak cementation; non-plastic; marine origin; cobbly coral shelf consisting of cemented shell and coral fragments

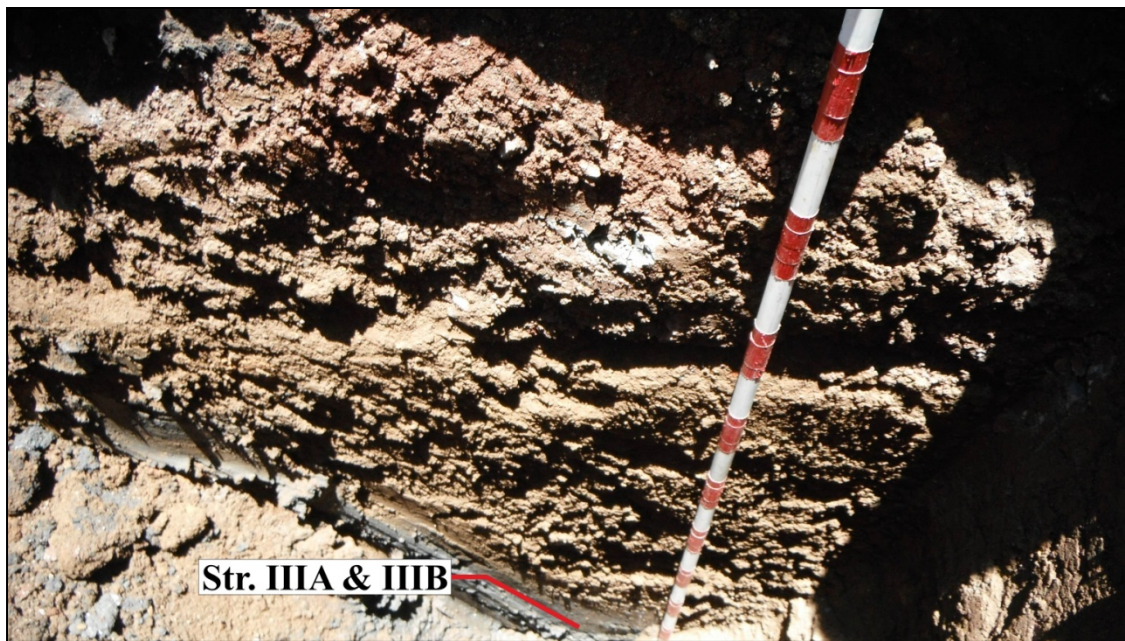


Figure 331. Tulchin and Hammatt (2013; label not in original) Trench 7 southwest wall, showing wetland sediments (SIHP # -7426) below fill strata, view to southwest

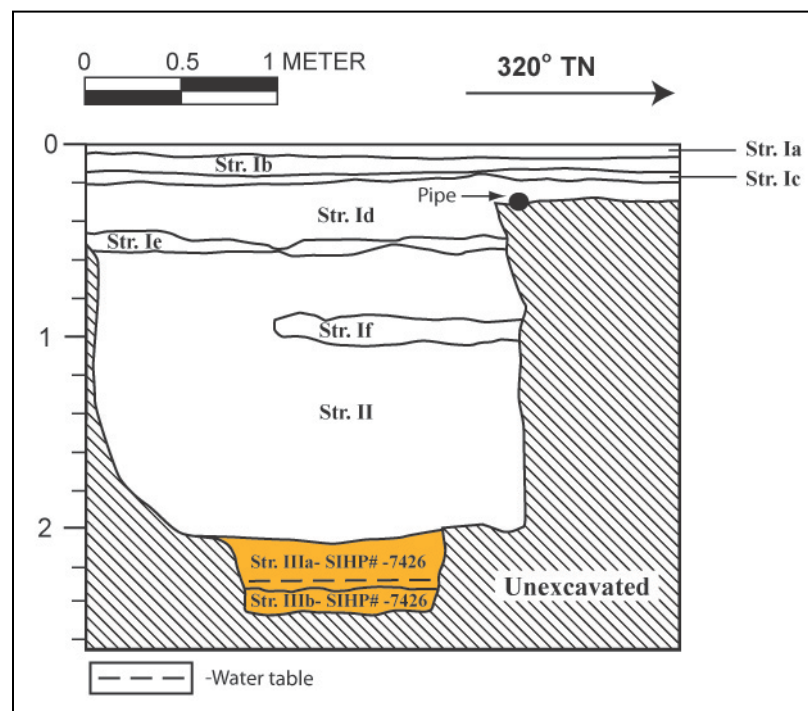


Figure 332. Tulchin and Hammatt (2013; color and label not in original) Trench 7 southwest wall profile, showing wetland sediments (Strata IIIa-Strata IIIb of SIHP #-7426)

Table 68. Trench 7 Stratigraphic Summary (adapted from Tulchin and Hammatt 2013)

<b>Stratum</b>	<b>Depth (cmbs)</b>	<b>Description</b>
Ia	0-5	Basalt gravel ground cover
Ib	5-15	10 YR 4/4, dark yellowish brown; silt loam; weak, fine, crumb structure; moist, friable consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; Imported fill material
Ic	15-25	10 YR 8/2, very pale brown; crushed coral fill; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; crushed coral in coarse sand matrix fill material
Id	20-55	5 YR 3/4, dark reddish brown; clay loam; weak, fine, crumb structure; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; Imported fill material
Ie	45-57	10 YR 3/1, very dark gray; sandy loam; weak, fine, crumb structure; moist, loose consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; compacted coarse sandy loam containing modern refuse: metal, glass, etc. 35% basalt boulders
II	50-207	10 YR 4/4, dark yellowish brown; clay loam; weak, fine, crumb structure; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; locally procured fill material
IIIa	195-235	10 YR 2/1, black; clay; structureless, massive; wet, sticky consistency; plastic; terrigenous origin; abrupt, smooth lower boundary; natural clay deposit containing marsh remnants with fresh water snails and organically enriched material; wetland deposit; component of SIHP #-7426
IIIb	232-245 (BOE)	10 YR 3/1, very dark gray; clay; structureless, massive; wet, sticky consistency; plastic; terrigenous origin; abrupt, smooth lower boundary; natural clay deposit containing marsh remnants with fresh water snails and organically enriched material; wetland deposit; component of SIHP #-7426

Seven sediment profiles were recorded, six of which documented fill layers over locally-procured silty clay loam sediment that was likely the result of dredging Kapālama Canal. Profile 7 revealed a wetland deposit (SIHP #-7426). It should be noted that each of the six profiles that did not document wetland deposits had relatively shallow bases of excavation that were typically higher than the upper level of the wetland deposits. Therefore, it is possible that those six profile locations contain wetland deposits at deeper depths than were excavated.

The depositional sequence of Profile 7 consisted of the coral shelf at the base of excavation. Naturally-deposited wetland sediments (SIHP #-7426) occur atop the shelf beneath two fill layers of locally procured silty clay loam (dredged sediment from Kapālama Canal). Atop these fills is modern imported sod (Figure 333, Figure 334, and Table 69). The documented wetland sediments consisted of very dark greenish gray sandy clay, with an abundance of decomposing organic material. These sediments were encountered between 1.70 and 2.20 mbs (Medina et al. 2013:58).

During the current City Center AIS, subsurface wetland sediments were observed in 28 sequential test excavations (T-054 through T-082) within the East Kapālama Zone. The general depositional sequence consisted of the coral shelf (generally designated as Stratum III; not always reached), with the naturally deposited wetland/agricultural sediments (generally designated as Stratum II, IIa, or IIb – identified as SIHP #-7426) overlying it. Above the wetland sediments, multiple historic-era fill layers (generally designated as substrata of Stratum I) were present, followed by more modern fill events (including asphalt, base courses, and landscaping fill; also designated as substrata of Stratum I). Although the coral shelf was not encountered, documentation of T-080 depicts the general depositional sequence observed in T-054 through T-082 within the East Kapālama Zone (Figure 335, Figure 336, and Table 70).

The wetland sediments observed during the current City Center AIS consisted primarily of very dark gray to black clays and silty clays containing fine roots, decomposing organics, charcoal, and shells (Figure 337). These sediments were documented at depths ranging from 1.10 to 2.45 mbs, with an average upper boundary of 1.46 mbs. These naturally-deposited sediments were located beneath multiple fill layers associated mainly with land reclamation activities during the early to mid-twentieth century.

A Pleistocene limestone shelf is exposed on the current land surface at either end of the East Kapālama Geographic Zone (Figure 337). These slightly raised shelves represent the eastern and western boundaries of SIHP #-7426, which encompasses the intervening lowland wetlands.

A total of five test excavations (T-055, T-056, T-072, T-074, and T-082) within the interpolated boundary of SIHP #-7426 did not contain wetland sediments; however, they are included within the boundaries of the cultural resource. It seems likely that the wetland sediments were originally present, but have been previously removed from these test excavations and replaced with fill sediments. The area traversed by the Kapālama Canal is also excluded from the interpolated boundary of SIHP #-7426.

A single glass medicine bottle (Acc. #060-A-1 from T-060) was collected from the former wetland surface during the City Center AIS (Figure 339). The medicine bottle was manufactured for a drug store in Manila, Philippines, which opened in the 1930s or possibly slightly earlier.



Figure 333. Medina et al. (2013; label not in original), Profile 7, southwest wall, view to southwest

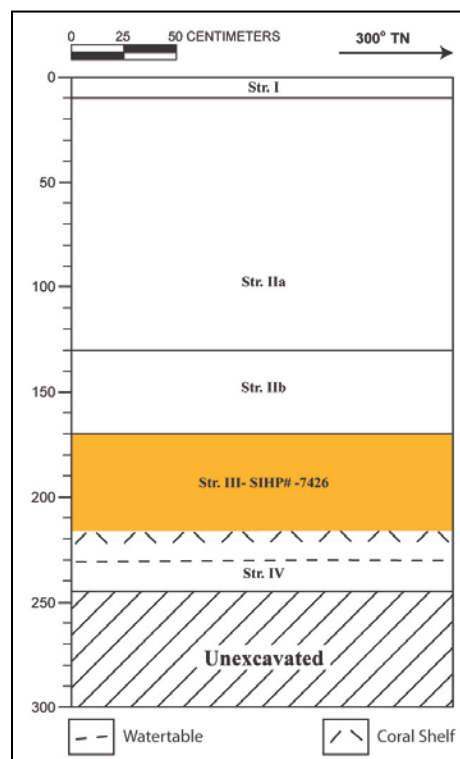


Figure 334. Medina et al. (2013; color and SIHP #-7426 label not in original) Profile 7, southwest wall, showing wetland deposits (Stratum III, SIHP #-7426)



Table 69. Profile 7 Stratigraphic Summary (adapted from Medina et al. 2013)

Stratum	Depth (cmbs)	Description
I	0-10	Modern imported sod
IIa	10-130	10 YR 5/4; yellowish brown silty clay loam; medium to coarse single grain structureless; dry, loose consistency; non-plastic; mixed sediment; abrupt, smooth lower boundary; locally procured silty clay loam fill with 35 percent coral pebbles and cobbles; sediment dredged from Kapālama Canal
IIb	130-170	10 YR 6/4; light yellowish brown silty clay loam; very coarse single grain structureless; moist, firm consistency; non-plastic; mixed sediment; clear, smooth lower boundary; locally procured silty clay loam fill with 50 percent coral cobbles and boulders; sediment dredged from Kapālama Canal
III	170-220	Gley 2 3/5BG; very dark greenish gray with 20 percent 10 YR 2/1 black mottles sandy clay; moderate grade, medium blocky structure; wet, slightly sticky consistency; very plastic; mixed sediment; clear, smooth lower boundary; organically-enriched wetland sediment; component of SIHP #-7426
IV	220-245 (BOE)	Gley 2 3/5B; very dark bluish gray coral; coarse massive structureless; wet, slightly sticky consistency; non-plastic; marine sediment; natural coral shelf



Figure 335. T-080 northeast wall, showing wetland sediments (Stratum II, SIHP #-7426) at and above the water table, view to northeast



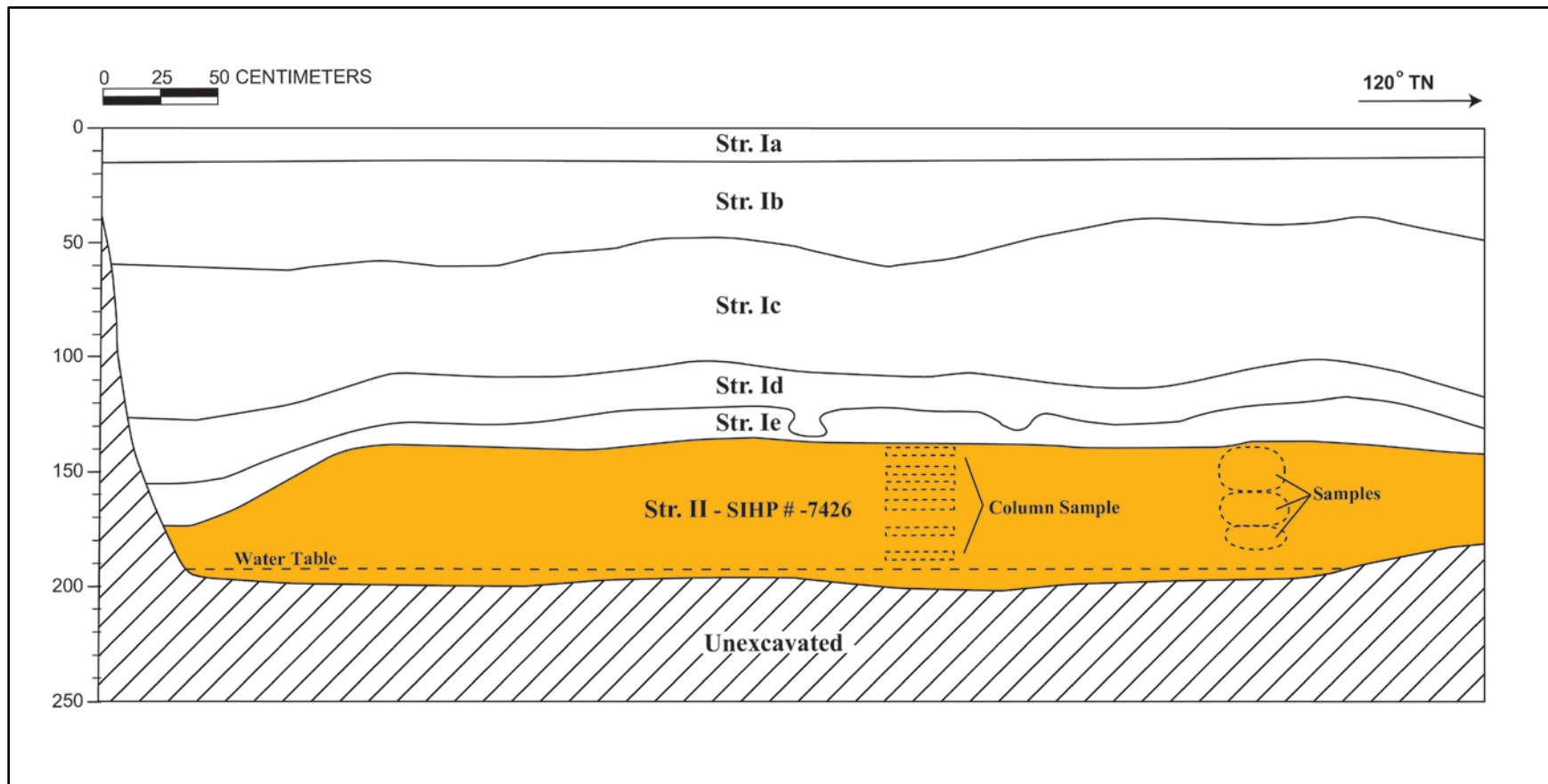


Figure 336. T-080 northeast wall profile

Table 70. T-080 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-14	Asphalt (road surface)
Ib	14-60	Fill; 10 YR 5/1 (gray); extremely gravelly sand; structureless, single-grain; dry, loose consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; contains 90 percent basalt gravel; base course
Ic	40-127	Fill; 10 YR 8/3 (very pale brown); extremely gravelly sand; structureless, single-grain; dry, loose, consistency; non-plastic; marine origin; clear, smooth lower boundary; contains 90 percent coral gravel; crushed coral fill
Id	103-155	Fill; 10 YR 6/3 (pale brown); fine to medium sandy clay; structureless, massive; moist, friable consistency; plastic; mixed origins; very abrupt, wavy lower boundary; hydraulic fill
Ie	120-175	Fill; Gley2 4/10B (dark bluish gray); silty clay; structureless, massive; wet, sticky consistency; non-plastic; marine origin; very abrupt, smooth lower boundary; hydraulic fill
II	137- 201 (BOE)	Natural, buried A-horizon; Gley2 3/10B (very dark bluish gray); silty clay loam; moderate, very fine, blocky structure; wet, sticky consistency; terrigenous origin; lower boundary not visible; natural wetland sediment; component of SIHP # -7426



Figure 337. Subsurface wetland sediment collected from T-078 showing plant leaves and stems (possibly rice) and other organic matter

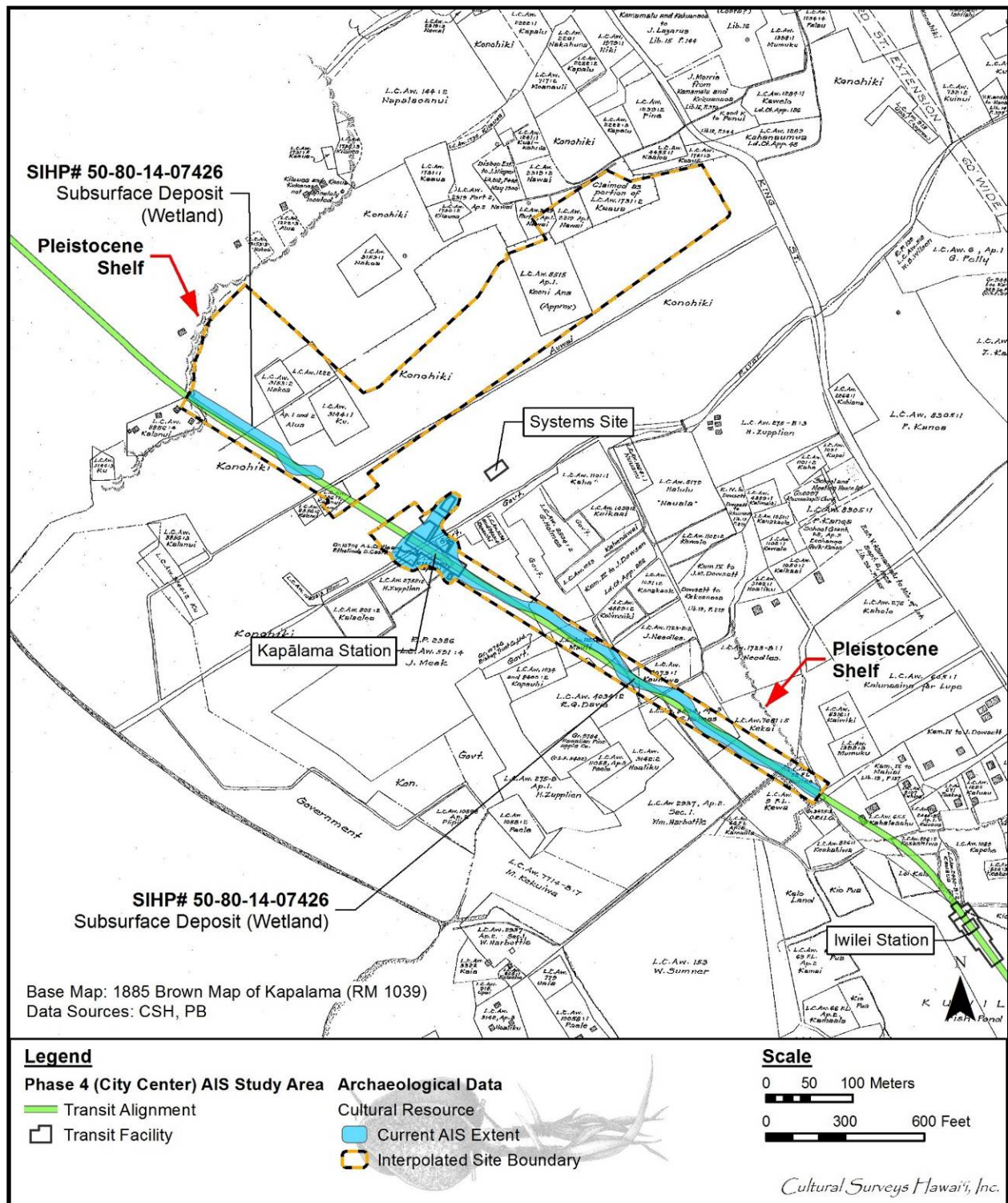


Figure 338. 1885 map of Kapālama by J. F. Brown (RM 1039), depicting the Pleistocene shelf (red arrows) at the east and west boundaries of the East Kapālama Geographic Zone



Bulk sediment sample analysis from the wetland deposits yielded marine shells, non-marine snail shells, charcoal, pollen, seeds, wood fragments, *kukui* nut shells, and fish bone, with the most common items being charcoal and shells. Specialized analyses were performed on snail shells from three test excavations, pollen samples from two test excavations, and charcoal fragments from two test excavations. These results are presented below.

Snail shells were identified in T-057, T-075, and T-078. The presence of an estuarine, strandline, and shoreline-dwelling species (*A. parvula*) is consistent with a coastal location. A permanent fresh- or brackish water environment was indicated by the presence of *M. tuberculata*. The presence of truly terrestrial mollusks (*H. minuscula* and *B. similis*) suggests that these specimens may have been washed in from adjacent upland localities. The presence of historically-introduced alien species (*L. viridis* and *H. minuscula*) indicates that two of the samples (from T-057 and T-078) date to the historic period (or were subject to contamination from more recent sediments); this would be consistent with mid- to late-nineteenth century (or later) rice cultivation.

Pollen analysis on six column samples (T-067 Sample Nos. 1, 2, 3 and T-080 Sample Nos. 4, 5, 6) also indicates that the East Kapālama Zone and adjacent areas formerly consisted of a wetland environment that was modified for agriculture. Cyperaceae pollen was dominant in the T-067 samples, suggesting that this location was a well-developed wetland with a large sedge population. Small quantities of *Vigna sinensis* (cowpea) pollen may indicate that the area was used for the cultivation of these edible beans. The pollen record from T-067 also included significant quantities of *Oryza*-type pollen, indicating that rice fields were probably located in this wetland environment. Possible rice leaves and stalks were identified within the wetland sediment of T-078 (see Figure 337). Charred grass pollens (Poaceae) may represent the burning of rice or sugar cane fields in the vicinity. Non-agricultural wetland vegetation included cattails (*Typha angustifolia*) and an abundance of ferns.

The pollen record from T-080 is also indicative of a wetland environment dominated by sedges and a variety of marsh grasses (Poaceae). Cattails (*Typha*), a variety of endemic vine (*Sicyos*), and an array of ferns made up the local vegetation of the marsh. Coconut (*Cocos nucifera*) and either sugar cane or *pili* grass (Poaceae) grew in the vicinity, while *‘āheahea* shrubs probably grew in the drier areas of the landscape. The presence of *honohono* (*Commelina*), a non-native plant that flourishes in disturbed areas such as agricultural fields, provides a possible date of mid- to late-nineteenth century or later for T-80 Sample 4. The uppermost sample from this test excavation contained *Colocasia* pollen, suggesting that this portion of the wetland was used in more recent times for taro cultivation. *Kiawe* (*Prosopis*) pollen in the upper two samples supports a historic date for the agricultural activity in this wetland environment. The quantities of microscopic charcoal in the samples appear to increase through time, perhaps indicating the burning of agriculture fields.

Taxa identification on charcoal fragments collected from the wetland deposits in T-075 and T-078 revealed a mix of native and introduced trees. T-075 contained fragments of *naio*, *‘ōhi‘a lehua*, and conifer trees, while T-078 wood fragments consisted of *‘ōhi‘a lehua*, *niu* or coconut, and conifer trees. The presence of conifer in the wetland sediments from both test excavations



Figure 339. A ca. 1930s medicine bottle (Acc. #060-A-1) from SIHP #-7426 in T-060

may indicate that the wetland, or at least the uppermost portion of it, dates to the historic period. Conifer (Pinaceae) trees are wind-pollinated and their pollen is very resilient and can travel long distances. The minute amount of Pinaceae in the pollen record indicates that these trees were not part of the local vegetation.

Macro remains from wetland samples from T-064, T-068, and T-076 included *Ruppia maritima* seeds, indicating that this variety of sea grass was part of the aquatic vegetation. The seeds were collected from depths ranging between 1.30 and 1.91 mbs, with an average upper depth of 1.63 mbs.

SIHP #-7426 consists of subsurface wetland sediments that were identified in three previous archaeological studies and 28 contiguous test excavations (T-54 to T-82) during the current archaeological inventory survey. The buried wetland spans a low-lying area between two raised Pleistocene limestone shelves that are located at either end of the East Kapālama Geographic Zone. The wetland sediments generally consist of dark-colored clay and silty clay. Several defining characteristics of these wetland deposits are the presence of marine invertebrates, non-marine snails, charcoal, and a high percentage of organic material, including peat. Pollen present in the analyzed wetland sediment samples indicates cultivation of several plants (rice, taro, and possibly cowpeas) suggesting an agricultural function. Additionally, LCA documents and historic maps indicate that the area was previously cultivated. The wetland agricultural deposits are located more than one meter below the current ground surface beneath thick fill layers. Background research indicates that these fill layers are likely associated with land reclamation activities during the early to mid-twentieth century, when the former low-lying wetland surface was filled in for urban development.

Within the current project area, SIHP #-7426 extends for approximately 2.47 acres between two Pleistocene limestone shelves. Within the Tulchin and Hammatt (2013) project area, the cultural resource extends over an area of 12.84 acres. The cultural resource encompasses the entire project areas of both the Pammer and Monahan (2011) and the Medina et al. (2013) project areas, 4.13 acres and 1.34 acres, respectively. In total, SIHP #-7426 covers an area of approximately 24.81 acres between the four investigations.

Based on the guidance of National Register Bulletin No. 15, SIHP #50-80-14-7426 retains its integrity of location and materials. CSH recommends that this cultural resource maintains the integrity to support its historic significance under Criterion D (has yielded, or is likely to yield, information important for research on prehistory or history) of the Hawai'i and the National Registers, exclusively for its information potential.

SIHP # 50-80-14-7426 has provided, and could potentially provide, additional information regarding the geographic extent, paleoenvironment, and cultural modification of the pre- and post-Contact wetlands of coastal Kapālama. Evidence from previous studies indicates that these subsurface deposits extended well outside of the current City Center project area. The possibility of encountering additional wetland/agricultural deposits during future project-related ground disturbance warrants the implementation of an archaeological monitoring program. Archaeological monitoring will provide further stratigraphic exposures that may reveal structural remains, such as berms of 'auwai (irrigation channels), and opportunities for additional collection of column samples and detailed specialized macro- and micro-analyses.

**5.3.15 SIHP #50-80-14-7427**

<b>FORMAL TYPE:</b>	Subsurface infrastructure remnants, cultural deposits, human skeletal element
<b>FUNCTION:</b>	Habitation and commercial infrastructure
<b>PREVIOUS DOCUMENTATION</b>	N/A
<b>AGE:</b>	Post-Contact
<b>NUMBER OF FEATURES:</b>	14
<b>TYPES OF FEATURES:</b>	12 buried structural remnants, 1 historic refuse pit, and 1 human talus bone
<b>DISTRIBUTION:</b>	Approximately 0.25 acres (total area)
<b>LOCATION:</b>	Located at the corner of Nimitz Highway and Kekaulike Street intersection (Downtown Waterfront Geographic Zone)
<b>TAX MAP KEY:</b>	TMK [1] 1-5-002:026; and [1] 1-5-002 (Nimitz Highway ROW por.)
<b>LAND JURISDICTION:</b>	City and County of Honolulu
<b>TEST EXCAVATIONS:</b>	T-096 through T-101 and C-1 through C-6

SIHP #50-80-14-7427 is a newly-identified cultural resource consisting of subsurface infrastructure remnants, cultural deposits, and a human skeletal element located 3 m east of Nimitz Highway near the Kekaulike Street intersection (Figure 340). The cultural resource includes archaeological features and deposits that were identified within six test excavations (T-096 through T-101) and six geotechnical test bores (C-1 through C-6) dug within the Chinatown Transit Station footprint (Figure 341).

The depositional sequence observed throughout SIHP #-7427 generally consists of a buried late Pleistocene calcareous reef (coral reef) identified at the base of T-096, T-097, C-1, and C-3 through C-6. Natural sandy loam or clay loam sediment was observed overlying the coral shelf within T-096 and T-097, at the base of excavation within T-100 and T-101, and at or above the water table within each of the cores (C-1 through C-6). The natural sediment was designated Stratum II within each of the test excavations except within T-097 where the sediment is subdivided into Stratum II (previously-disturbed upper portion) and Stratum III (in situ lower portion). The natural sediment (II and III) contained both traditional Hawaiian and historic artifacts, faunal remains, shell midden, and charcoal, and is considered a component of SIHP #-7427.

Multiple fill strata overlie the natural sediment in each of the test excavations (T-096 through T-101) and cores (C-1 through C-6), ranging from four fill deposits within T-098 and T-099 to eleven fill deposits within T-100. Three of the fill strata (Id, If, and Ii in T-096) were identified as culturally-enriched deposits and were considered, along with the natural sediment, to be components of SIHP #-7427. In addition, the 14 archaeological features (1–14) identified within fill deposits above the natural sediment were designated as components of SIHP #-7427. These features consist of 12 historic structural remains (mainly concrete slabs, walls, and foundation remnants), 1 historic refuse pit, and 1 human skeletal element.



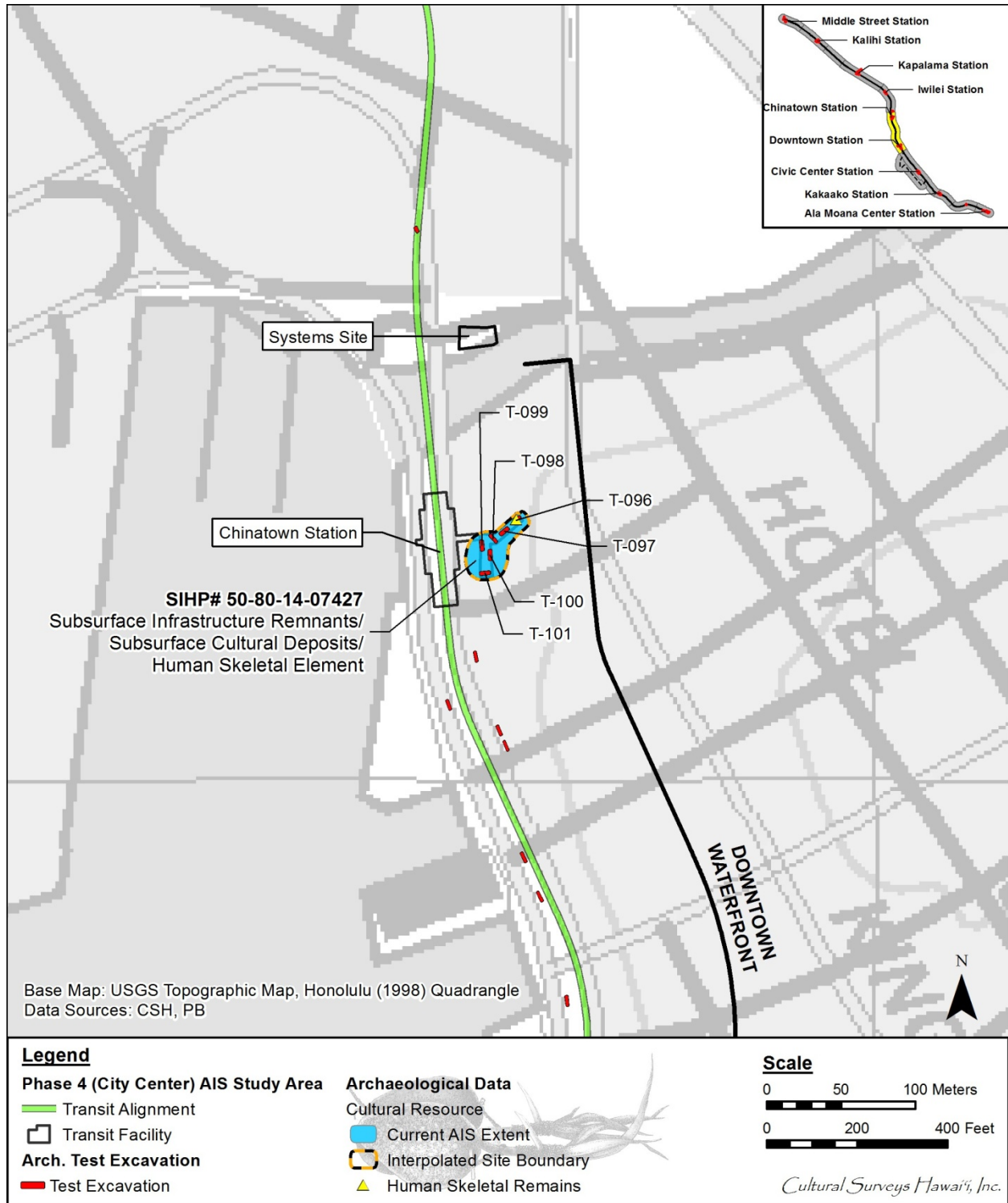


Figure 340. Location of SIHP # -7427 within the Chinatown Transit Station footprint (Base Map: 1998 USGS Topographic Map of Honolulu)

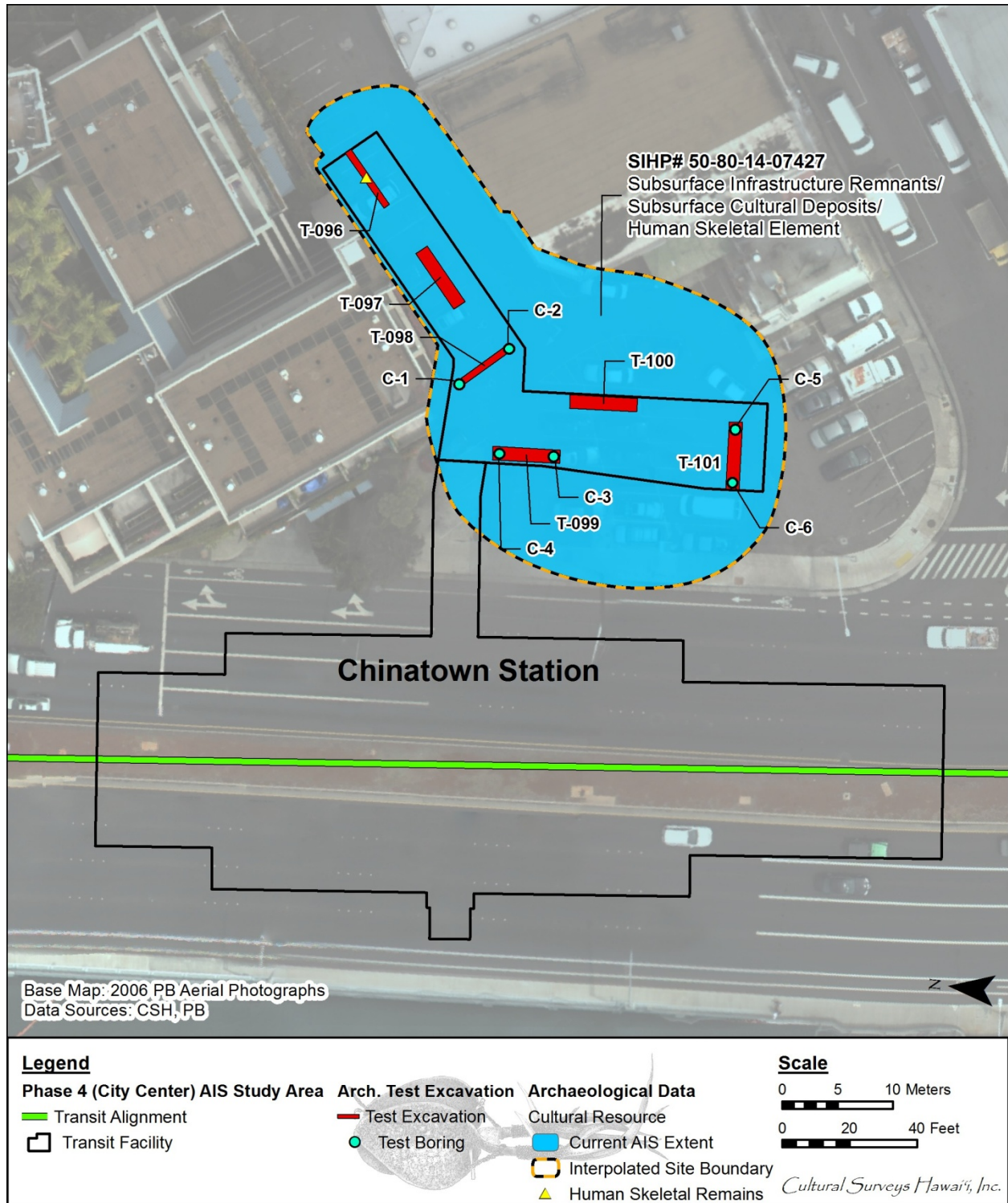


Figure 341. Location of the test excavations (T-096 through T-101) and geotechnical test bores (C-1 through C-6) where SIHP # -7427 was identified within Chinatown Transit Station footprint (Base Map: 2006 PB Aerial Photograph)

In T-096, SIHP #-7427 consists of the natural sediment (Stratum II), three culturally-enriched fill strata (Id, If, and Ii), two structural features (Features 1 and 2) and a single human skeletal element (Feature 3). Feature 1 (wall and foundation remnant) predates Stratum Ig and may be contemporaneous with Stratum Ih, however the base of the wall was not fully exposed. Feature 2 was identified within the culturally-enriched Stratum Id, while Feature 3, found in the backdirt, is believed to be from Stratum If.

In T-097, SIHP #-7427 consists of the natural sediments (Strata II and III) and four structural features (Features 4–7). Feature 4 (wall and slab) is founded in Stratum Ie and appears to have been constructed immediately atop Feature 6. Feature 5 (slab) abuts the Feature 4 wall, postdates deposition of Stratum Ie, and thus appears to postdate Feature 4. Feature 6 (slab) possibly was constructed atop Stratum II, however the base of the slab was not fully exposed. Feature 7 (wall and slab) may have been constructed during deposition of Stratum If, but this is uncertain as the base was not fully exposed.

In T-098, SIHP #-7427 consists only of a single structural feature (Feature 8). Although assumed present, excavation was terminated prior to exposing the natural sediment in T-098. Feature 8 consists of two components, a concrete wall remnant and a concrete slab remnant. The wall appears to predate the slab remnant, having been constructed possibly prior to the initial deposition of Stratum Ie. In contrast, the concrete slab is founded in the upper Stratum Ie deposit.

In T-099, SIHP #-7427 consists of a single structural feature (Feature 9). Like T-098, excavation was terminated prior to exposing the natural sediment. Feature 9 consists of a concrete slab and a concrete block that sits atop a possibly uplifted section of the slab. Along its length, several fill strata (Ie-Ig) underlie the concrete slab.

In T-100, SIHP #-7427 consists of natural sediment (Stratum II) and three structural features (Features 10–12). Feature 12 (basalt pavement) predates Features 10 (slab) and 11 (drainage channel). Feature 12 was constructed during the deposition of Stratum Ig. Feature 11 was constructed during deposition of Stratum Ie and predates Feature 10 which is situated in the upper portion of Stratum Ie.

In T-101, SIHP #-7427 consists of natural sediment (Stratum II), one structural element (Feature 13), and a large infilled trash pit (Feature 14). Feature 13 (slab) underlies Stratum Ib, the base course below the modern asphalt parking surface (Stratum Ia). Feature 14 is intrusive into the natural sediment (Stratum II) and likely was truncated by later fill strata Ie and Ic.

In Cores C–1 through C–6, SIHP #-7427 consists only of natural sediment (Stratum II). These six geotechnical test bores were drilled near the west (C–1) and east (C–2) ends of T-098, the south (C–3) and north (C–4) ends of T-099, and the east (C–5) and west (C–6) ends of T-101 (Figure 347 and Table 73). No structural remnants were identified and the diameter of the cores was too small to identify possible culturally-enriched fills below the upper “drill through” section. The culturally-enriched natural sediment (SIHP #-7427) and additional fill deposits were also documented

The culturally-enriched natural sediment (SIHP #-7427) within T-096, T-097, T-100, T-101, and Cores C–1 through C–6 contained both traditional Hawaiian and historic artifacts, faunal remains, shell midden, and charcoal. The artifacts collected during excavation consist of four pieces of volcanic glass debitage, one bone net mender, one boar tusk ornament, six Asian and

Euro-American ceramic fragments, and 17 bottle glass fragments from T-096; one basalt adze flake, four basalt flakes, and a complete spirits bottle with an applied lip from T-100; and three Asian and Euro-American ceramic fragments and eight bottle/bottle fragments from T-101. Artifacts collected from the Stratum II bulk sediment samples consist of ceramic fragments (T-096 and T-097) and bottle glass fragments (T-097). The bulk samples collected from the natural sediment also yielded shell midden and charcoal. Faunal remains collected from Stratum II of T-096 include *Sus scrofa*, *Canis lupus familiaris*, and other medium mammal skeletal elements. Faunal remains collected from the Stratum II/III interface of T-097 consisted of *Equus ferus caballus*.

The three culturally-enriched fill strata designated as components of SIHP #-7427 consist of Strata Id, If, and Ii in T-096. Stratum Id occurs below the modern asphalt surface (Ia) and gravel base course (Ib); a crushed coral grading fill (Ic) is present within the boundaries of Id. It is identified as dark gray (2.5 Y 4/1) very gravelly sandy loam containing historic artifacts and architectural and a single structural remnant, a poured concrete slab (Feature 2). The architectural items collected from Stratum Id consist of red, yellow, and tan-yellow machine-made bricks, a large possible iron spike, and machine-cut nail fragments. Also collected was a ceramic architectural item fragment.

Stratum If in T-096 immediately underlies fill Stratum Ie, a gravelly sandy loam, and overlies fill Stratum Ig, a gravelly silty loam, and a portion of fill Stratum Ih, a silty clay loam. No structural remains were identified within Stratum If which contained historic artifacts and debris, and a single human talus bone (Feature 3). Although not collected, the artifacts and debris were recorded as including ceramic and glass fragments, as well as nails and burnt inclusions. The human skeletal element, found in the backdirt, is believed to be from the Stratum If deposit. Because of this probable association, fill Stratum If was designated as a culturally-enriched deposit and as a component of SIHP #-7427.

Stratum Ii in T-096 underlies fill Stratum Ih, a silty clay loam, and overlies both portions of fill Stratum Ij, a very gravelly loam, and Stratum II, natural gravelly sandy loam. Fill Stratum Ii contained both historic artifacts and mammal faunal remains suggestive of habitation or possible commercial activities (e.g., grocery, butchery). The artifacts collected from Stratum Ii include two Euro-American yellowware vessel fragments, one undecorated whiteware vessel fragment, and two Chinese porcelain vessel fragments. Also collected are 17 fragments from amber, clear, and dark olive bottles. The artifacts date from the late nineteenth to early twentieth century. Faunal remains collected from Stratum Ii include *Canis lupus familiaris*, *Sus scrofa*, *Bos taurus* and medium mammal skeletal elements.

The fourteen features (Features 1–14) identified as components of SIHP #-7427 consist of 12 historic building foundations, 1 historic refuse pit, and 1 human talus bone (Table 74). These features are briefly described in numerical order below.

**SIHP #-7427 Feature 1** is a structural remnant identified in T-096 between 0.30 mbs and 1.10 mbs. Although the base was not exposed, this feature appears to correlate with the deposition of the lower portion of fill Stratum Ih. SIHP #-7427 Feature 1 consists of the following three components: (1) two courses of mortared, machine-made red brick overlying and secured to (2) a poured concrete foundation that overlies (3) dry-laid basalt boulders (Figure 348). The exposed portion measured more than 1.4 m long by more than 0.15 m wide. This structural remnant

extended into the northwest sidewall of the excavation. SIHP #-7427 Feature 1 is a possible late nineteenth century building foundation.

**SIHP #-7427 Feature 2** is a structural remnant identified in T-096 between 0.27 mbs and 0.43 mbs. This poured concrete slab occurs within culturally-enriched Stratum Id, a very gravelly sandy loam fill. Stratum Id was designated a component of SIHP #-7427. The exposed portion of the slab measured over 2.33 m in length and more than 0.65 m in width. It extended into both the northwest and southeast side walls. SIHP #-7427 is a possible building floor, walkway, or foundation remnant, believed to date to the late 1800s or early 1900s.

**SIHP #-7427 Feature 3** is an isolated human talus bone identified during excavation within the backfill pile from T-096. The talus bone was estimated to have originated from approximately 0.70 mbs – possibly from a gravelly sandy loam layer (Stratum If). The artifacts observed but not collected from Stratum If include nails, small ceramic vessel sherds, and bottle glass fragments; as noted above, fill Stratum If was designated a component of SIHP #-7427 due to the presence of the human skeletal element.

**SIHP #-7427 Feature 4** is a structural remnant identified within T-097. This structural remnant consists of two components. The upper portion is a mortared, machine-made red brick wall, while the lower portion is a poured concrete slab. In turn, the lower portion of SIHP #-7427 Feature 4 sits directly atop a second concrete slab designated SIHP #-7427 Feature 6. The base of SIHP #-7427 Feature 4 (concrete slab) dates to the deposition of Stratum Ie. The exposed portion of the structural remnant components collectively measured 0.91 m in length and 0.20 m in width. The feature continues into the southeast sidewall. A machine-made brick fragment collected from Feature 4 dated from the 1918 to 1978 period. Feature 4 is a possible building foundation.

**SIHP #-7427 Feature 5** is a structural remnant identified within T-097. This structural remnant consists of a poured concrete slab that abuts the upper brick wall portion of SIHP #-7427 Feature 4 (Figure 351). The exposed portion of the slab measured 3.23 m long by more than 1.22 m wide; the slab extended beyond the width of the test excavation. SIHP #-7427 Feature 5 is a possible building floor or foundation.

**SIHP #-7427 Feature 6** is a structural remnant identified within T-097. Although the base of this poured concrete slab was not exposed, this structural remnant likely was constructed atop the culturally-enriched natural sediment (Stratum II; SIHP #-7427). The exposed portion of the slab measured 1.47 m long by more than 1.22 m wide; the slab extended beyond the width of the test excavation. SIHP #-7427 Feature 6 is a possible building foundation.

**SIHP #-7427 Feature 7** is a structural remnant identified within T-097. Although the base of the lower portion was not exposed, SIHP #-7427 Feature 7 appears to date to Stratum If. The feature consists of two components, the upper is two courses of dry-stacked subangular cobbles, while the lower consists of a basalt slab (Figure 353). The exposed portion measured more than 0.87 m long by more than 1.22 m wide. The remainder extended beyond the width of the excavation and into the southern end of T-097. SIHP #-7427 Feature 7 is a displaced remnant of a possible building foundation.

**SIHP #-7427 Feature 8** is a structural remnant identified within T-098. It consists of a poured concrete slab and a nearby concrete wall (Figure 354). The concrete slab occurs within the upper

portion of Stratum Ie between 0.60 mbs and 0.75 mbs. The base of the concrete wall was not reached at the base of excavation at 1.05 mbs. The wall extends to at least the lower portion of Stratum Ie, possibly earlier. It remains unknown whether the slab and wall remnants are components of a single building. SIHP #-7427 Feature 8 is a possible building floor and foundation wall.

**SIHP #-7427 Feature 9** is a structural remnant identified within T-099. It consists of a concrete slab and a concrete block that overlies an uplifted section of the slab (Figure 355). The slab overlies several fill strata, the lowest of which is Stratum Ig, while the concrete block is overlain only by Stratum Ia, the modern asphalt parking lot surface. The exposed portion measured over 6.10 m long and 1.22 m wide; the feature extended beyond the T-099 excavation in all directions. SIHP #-7427 Feature 9 is a possible building foundation.

**SIHP #-7427 Feature 10** is a structural remnant identified within T-100. This poured concrete slab dates to the upper deposition of fill Stratum Ie (Figure 356). It postdates both SIHP #-7427 Feature 11 (drainage channel) also founded in Stratum Ie and SIHP #-7427 Feature 12 (basalt pavement) founded in underlying fill Stratum Ig. The exposed portion of SIHP #-7427 measured over 2.74 m long by more than 1.24 m wide; the feature extended beyond the T-100 excavation in all directions. SIHP #-7427 Feature 10 is a possible building foundation.

**SIHP #-7427 Feature 11** is a structural remnant identified within T-100. This poured concrete drainage channel predates SIHP #-7427 Feature 10, also founded in fill Stratum Ie, and postdates SIHP #-7427 Feature 12 identified in underlying fill Stratum Ig (Figure 357). The concrete drainage channel measured 0.15 m long by over 1.24 m wide; it continued beyond the width of the test excavation. SIHP #-7427 Feature 11 is a former building drainage channel.

**SIHP #-7427 Feature 12** is a structural remnant identified within T-100. It is identified as a mortared, cut basalt pavement exposed in fill Stratum Ig (Figure 358). It predates SIHP #-7427 Features 10 (concrete slab) and 11 (concrete drainage channel), both exposed in overlying fill Stratum Ie. The exposed portion of SIHP #-7427 Feature 12 measured over 0.29 m long by 0.26 m wide; the pavement extended into the west excavation sidewall. SIHP #-7427 Feature 12 is a possible building foundation, floor, or walkway.

**SIHP #-7427 Feature 13** is a structural remnant identified within T-101. This concrete slab was overlain by Strata Ia (modern asphalt pavement) and Ib (base course). This small exposed poured concrete slab remnant overlies fill Stratum Id in the southern portion of T-101 (Figure 359). The exposed slab remnant measured over 1.80 m long by 1.20 m wide; it extended beyond the width of the excavation and into the southern wall. SIHP #-7427 Feature 13 is a possible building foundation.

**SIHP #-7427 Feature 14** is a historic refuse pit identified within T-101 between 0.60 and 1.15 mbs (Figure 360, Figure 361, and Table 75). SIHP #-7427 Feature 14 is intrusive into the natural sediment (Stratum II; SIHP #-7427). The upper limits of SIHP #-7427 Feature 14 likely was truncated by both fill Strata Ic and Ie. The exposed portion of the historic refuse pit measured 2.91 m long by over 1.20 m wide; it extended beyond the width of the test excavation. Historic artifacts collected above the feature from within Stratum Ic included an aqua bottle fragment with a possible Asian character stamped on the base. Historic artifacts observed within Stratum Ie, also above the pit, included red brick, charcoal, and faunal bone, of which only the



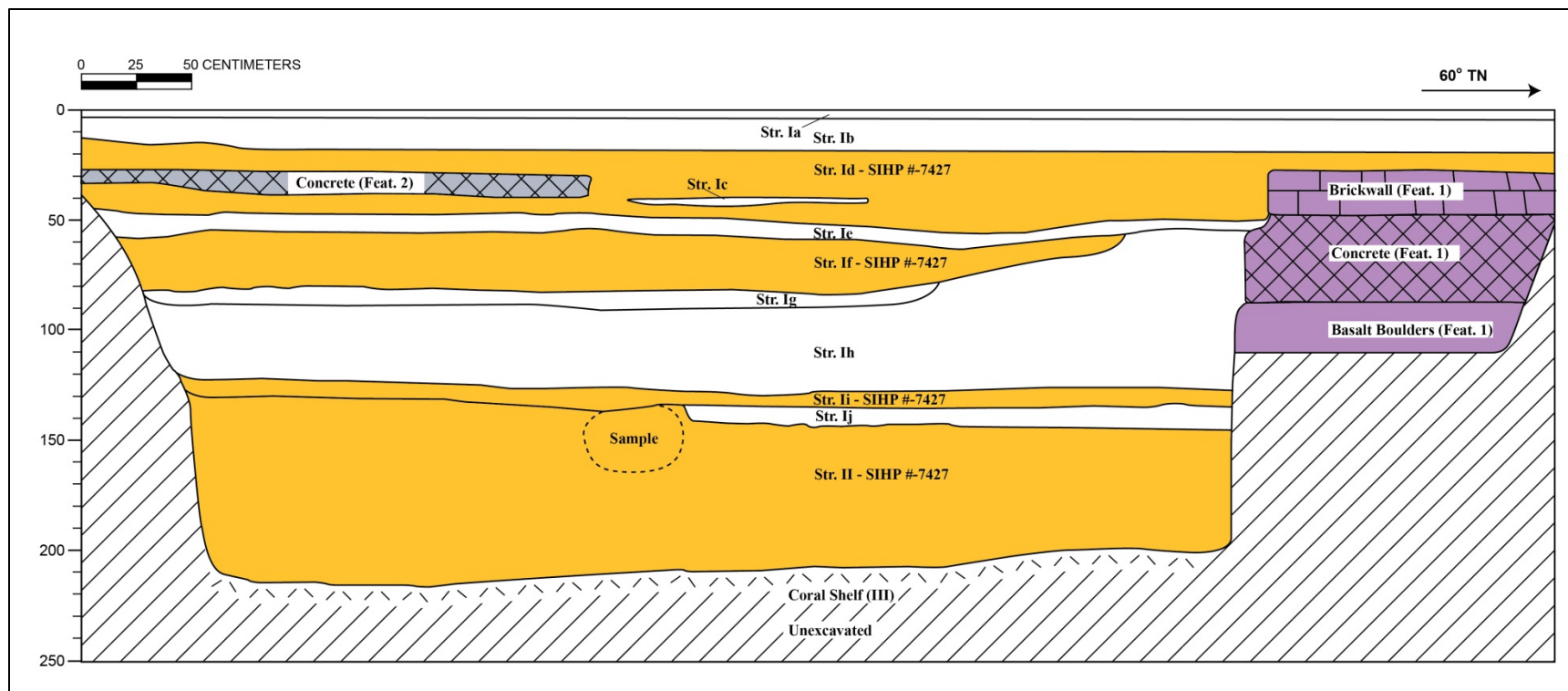


Figure 342. T-096 northwest wall profile

Table 71. T-096 Stratigraphic Description, northwest wall

Stratum	Depth (cmbs)	Description
Ia	0-3	Asphalt
Ib	3-20	Fill; 10 YR 5/1 (gray); very gravelly loam; structureless, single-grain; moist, loose consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; gravel base course
Ic	35-40	Fill; 2.5 Y 8/1 (white); very gravelly loam; weak, medium, blocky structure; moist, friable consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; crushed coral grading fill with concrete fragments
Id	20-46	Fill; 2.5 Y 4/1 (dark gray); very gravelly sandy loam; weak, fine, crumb structure; moist, loose consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; contained concrete and brick wall structures (SIHP #-7427 Feature 1), and concrete slab in southwest end (SIHP #-7427 Feature 2)
SIHP #-7427 Feature 2	27-43	Concrete slab; SIHP #-7427 Feature 2
Ie	46-55	Fill; 2.5 Y 8/1 (white); very gravelly loam; weak, medium, blocky structure; moist, friable consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; crushed coral fill
If	55-81	Fill; 2.5 Y 4/1 (dark gray); gravelly sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; contained nails, and very small glass and ceramic fragments (not collected);
SIHP #-7427 Feature 3	~70	A single human talus bone; found within backdirt believed to belong to Stratum If; SIHP #-7427 Feature 3
Ig	81-90	Fill; 10 YR 2/2 (very dark brown); gravelly silty loam; weak, medium, blocky structure; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; contained nails, glass, ceramics and burnt inclusions (not collected)
Ih	90-126	Fill; 7.5 YR 3/3 (dark brown); silty clay loam; structureless, single-grain; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; had bands of stream-deposited soil—some very sandy, some more clayey
SIHP #-7427 Feature 1	30-110	Building remnant consisting of a brick wall overlying concrete and a layer of basalt boulders; SIHP #-7427 Feature 1
Ii	126-140	Fill; 10 YR 2/2 (very dark brown); gravelly silty clay loam; weak, medium, blocky structure; moist, friable consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; contained faunal remains, rusted metal, slag inclusions, ceramic and glass (collected); designated as a component of SIHP #-7427



Ij	135-145	Fill; 2.5 Y 8/1 (white); very gravelly loam; weak, medium, blocky structure; moist, friable consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; crushed coral
II	129-216	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; weak, fine, crumb structure; moist, friable consistency; non-plastic; mixed origins; contained faunal bone and light shell midden (collected); previously disturbed natural sediment; designated as a component of SIHP #-7427

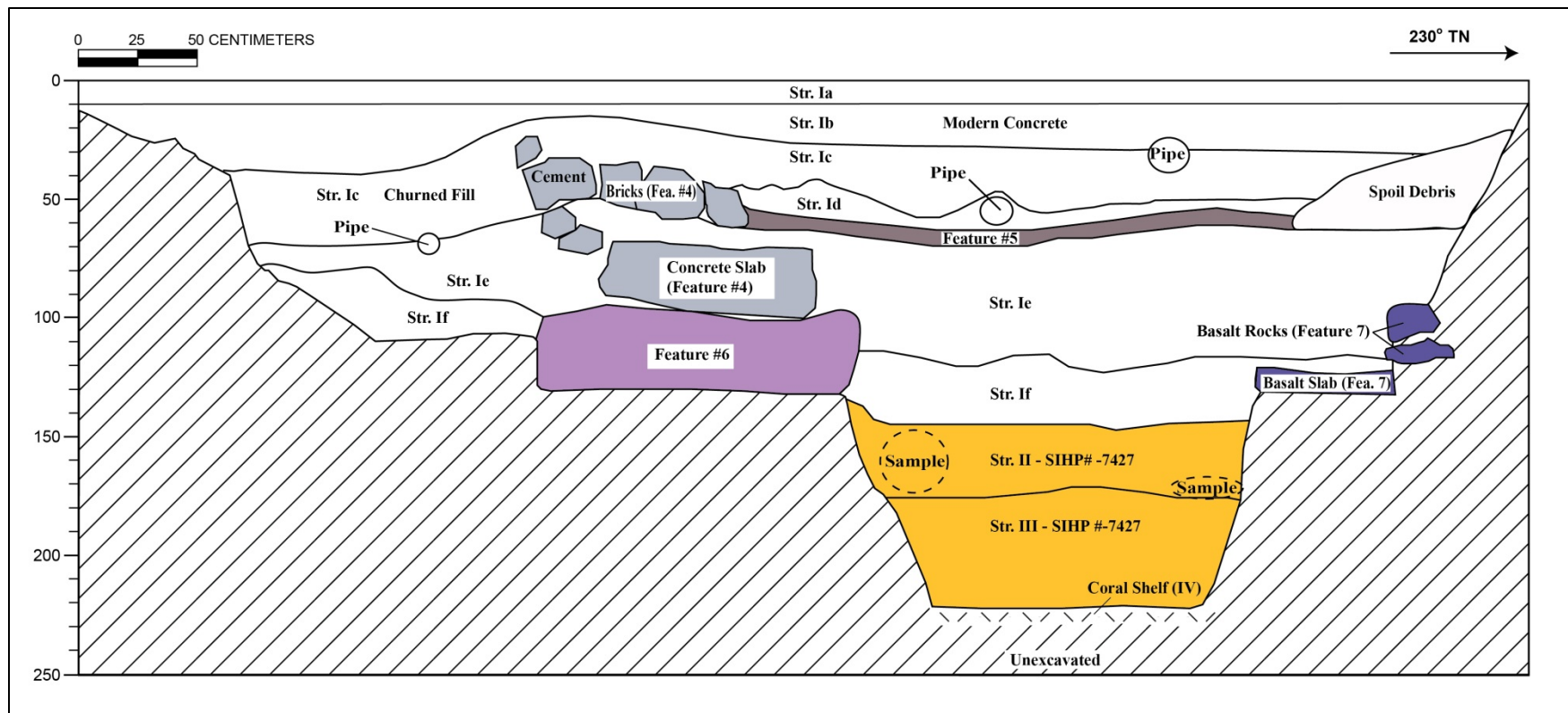


Figure 343. T-097 southeast profile wall

Table 72. T-097 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0–10	Asphalt
Ib	10–35	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; contained concrete utility jacket; base course imported fill
Ic	35–60	Fill; 10 YR 4/2 (light gray); gravelly sandy loam; weak, medium, blocky structure; moist, friable consistency; non-plastic; mixed origin; broken/discontinuous lower boundary; appeared to be associated with metal pipe remains; contained ceramics, bottle glass, and miscellaneous historics (collected)
Id	40–60	Fill; 10 YR 3/2 (very dark gray brown); gravelly sandy loam; weak, fine, crumb structure; moist, loose consistency; non-plastic; contained ceramics and glass jar (collected), bottle glass fragments and metal (not collected); upper boundary consisted of a thin layer of burnt trash
SIHP #-7427 Feature 5	50–65	Concrete slab; possible building foundation remnant; SIHP #-7427 Feature 5
Ie	60–123	Fill; 10 YR 3/3 (dark brown); very gravelly sandy loam; weak, medium to coarse, crumb structure; moist, very friable consistency; non-plastic; mixed origin; abrupt, wavy lower boundary; contained glass and ceramics; includes SIHP #-7427 Feature 4
SIHP #-7427 Feature 4	35–70	Mortared red brick wall overlying a concrete slab; possible building foundation remnant underlying Stratum Id; SIHP #-7427 Feature 4
If	80–145	Fill; 7.5 YR 3/3 (dark brown); silty clay loam; structureless, massive; moist, very firm consistency; plastic; terrigenous origin; abrupt, smooth lower boundary; contained metal, a rounded fiberglass dish (bowl/cup); distinct striations present, possibly caused by water; includes SIHP #-7427 Feature 6 and Feature 7
SIHP #-7427 Feature 6	70–136	Concrete slab; possible building foundation remnant; SIHP #-7427 Feature 6
SIHP #-7427 Feature 7	95–130	Stacked basalt cobbles overlying a basalt slab; possible building foundation remnant; SIHP #-7427 Feature 7
II	135–180	Natural; 10 YR 2/2 (very dark brown); sandy loam; structureless, single-grain; moist, firm consistency; non-plastic; mixed origin; clear, smooth lower boundary; contained abundant charcoal and shell fragments, faunal bone; previously disturbed or reworked natural sediment; component of SIHP #-7427

III	175–222	Natural; 10 YR 4/3 (brown); sandy loam; structureless, single-grain; moist, loose to very friable consistency; non-plastic; mixed origin; abrupt lower boundary; in situ natural sediment; designated a component of SIHP #-7427
IV	222 (BOE)	Natural; 10 YR 7/4 (very pale brown); bedrock-limestone; structureless, massive; moist, weakly to strongly cemented; discontinuous consistency; non-plastic; marine origin; lower boundary not observed; Pleistocene coral shelf



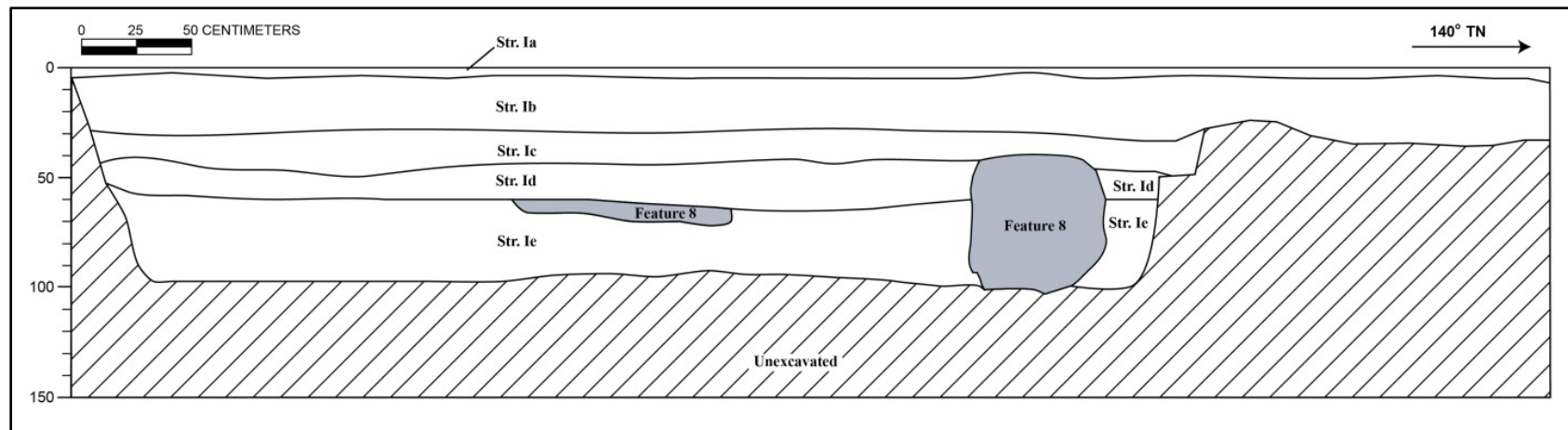


Figure 344. T-098 northeast profile wall

## T-098 Stratigraphic Description, northeast wall

Stratum	Depth (cmbs)	Description
Ia	0–5	Asphalt
Ib	5–30	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary
Ic	30–45	Fill; 7.5 YR 3/2 (dark brown) with mottles of 7.5 YR 8/1 (white); gravelly loam; moderate, medium, crumb structure; moist, very friable consistency; slightly plastic; terrigenous origin; diffuse, smooth lower boundary; contained construction gravel
Id	40–65	Fill; 2.5 YR 3/3 (dark reddish brown), with mottles of 10 YR 2/1 (black); clay; moderate, fine, blocky structure; moist, firm consistency; slightly plastic; terrigenous origin; diffuse, smooth lower boundary
Ie	55–110 (BOE)	Fill; 2.5 YR 2.5/1 (reddish black), with mottles of 7.5 YR 8/1 (white); very gravelly clay loam; medium, crumb structure; moist, very friable consistency; slightly plastic; terrigenous origin; contained red brick fragments, cement fragments, and a rusted metal nail; included SIHP #-7427 Feature 8
SIHP #-7427, Feature 8	45–105	Concrete slab and formed concrete structure; possible building foundation remnants; SIHP #-7427 Feature 8

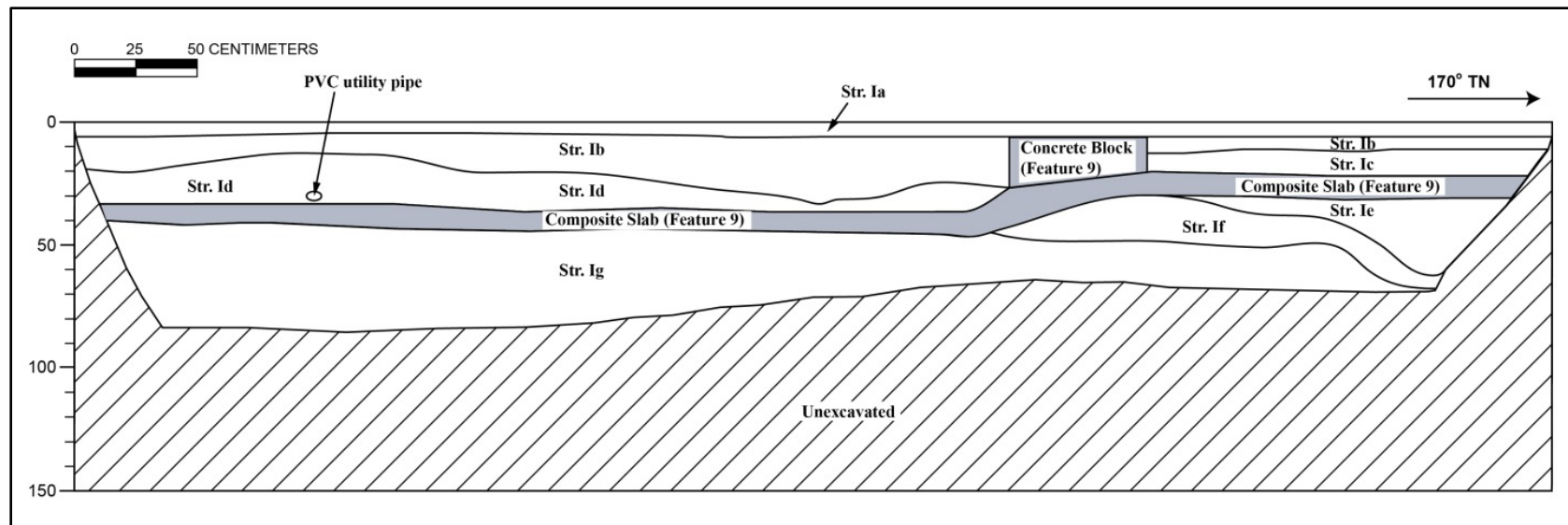


Figure 345. T-099 east profile wall

## T-099 Stratigraphic Description, east wall

Stratum	Depth (cmbs)	Description
Ia	0–5	Asphalt
Ib	5–26	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; contained concrete utility jacket; base course imported fill
Ic	12–23	Fill; 10 YR 4/2 (dark grayish brown); extremely gravelly sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; terrigenous origin; imported fill
Id	12–35	Fill; 7.5 YR 4/2 (brown); extremely stony clay; structureless, massive; moist, firm consistency; very plastic; terrigenous origin; lower boundary not visible; contained coral cobbles and small boulders
SIHP #-7427 Feature 9	5–46	Composite tile and concrete slab and overlying concrete block; possible building foundation remnants; SIHP #-7427 Feature 9
Ie	40–60	Fill; 10 YR 4/2 (dark grayish brown); extremely gravelly sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; terrigenous origin; imported fill
If	30–68	Fill; 7.5 YR 4/2 (brown); extremely stony clay; structureless, massive; moist, firm consistency; very plastic; terrigenous origin; lower boundary not visible; contained coral cobbles and small boulders
Ig	40–88 (BOE)	Fill; 10 YR 4/3 (brown); extremely stony silt loam; structureless, single-grain; moist, loose structure; non-plastic; terrigenous origin; lower boundary not visible; imported fill



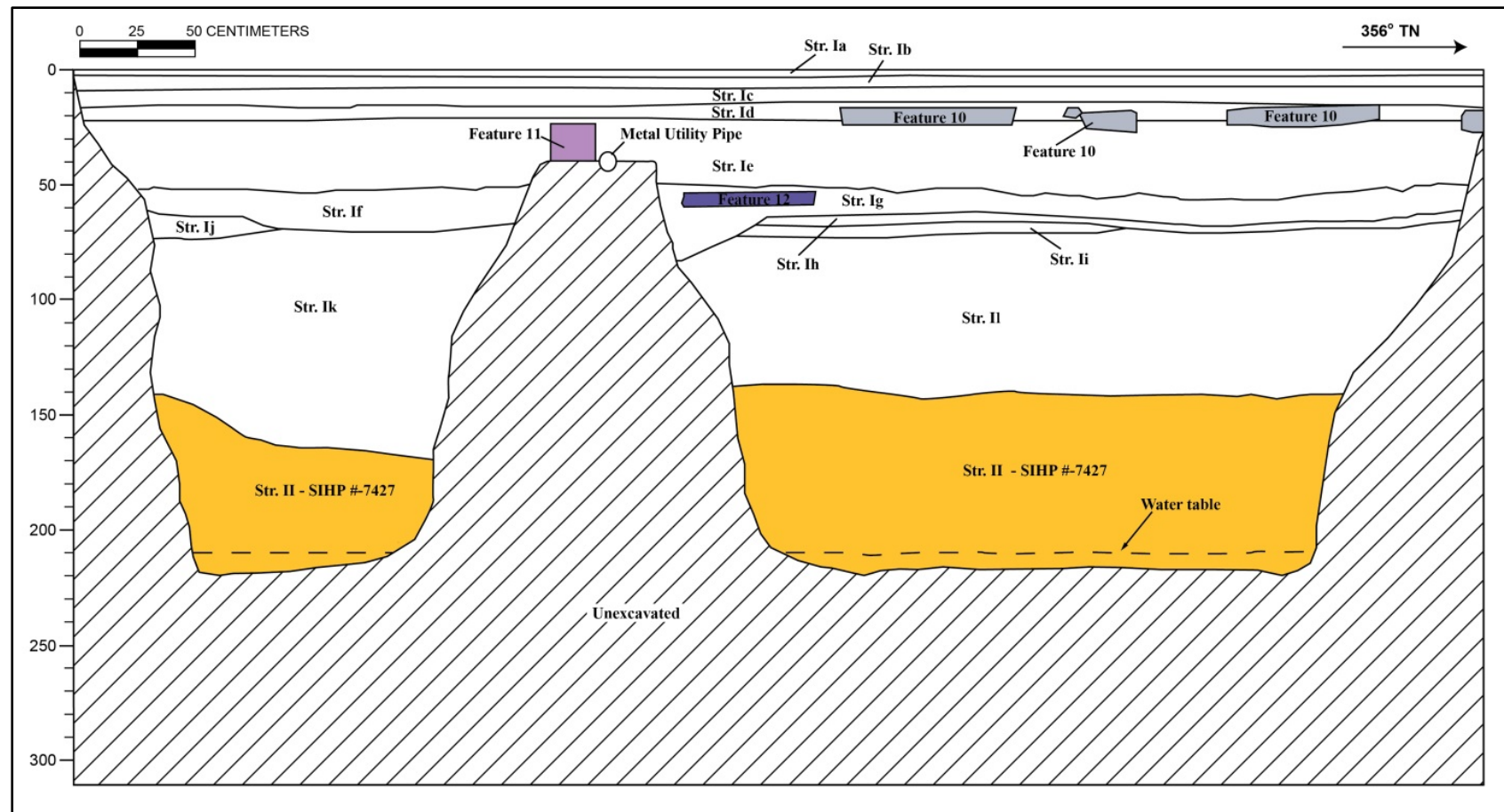


Figure 346. T-100 west profile wall

## T-100 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-3	Asphalt
Ib	3-9	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; contained concrete utility jacket; base course imported fill
Ic	9-17	Buried asphalt surface
Id	15-23	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; base course imported fill; contains SIHP #-7427 Feature 10
SIHP # -7427 Feature 10	19-28	Concrete slab; possible building foundation remnant; SIHP #-7427 Feature 10
Ie	23-58	Fill; 10 YR 8/2 (very pale brown) with mottles of 10 YR 4/2 (dark grayish brown); very gravelly sandy loam; strong, fine, blocky structure; moist, firm, strong consistency; non-plastic; mixed origin; diffuse, smooth lower boundary; contained utilities; includes SIHP #-7427 Feature 11
SIHP # -7427 Feature 11	24-40	Concrete drainage channel; possible building foundation remnant; SIHP #-7427 Feature 11
If	52-71	Fill; 10 YR 3/2 (very dark grayish brown) with mottles of 10 YR 8/2 (very pale brown); very gravelly loam; weak, fine, granular structure; moist, very friable, weak consistency; slightly plastic; mixed origin; lower boundary visible; contained rusted nail and charcoal (not collected); ceramic (collected)
Ig	51-84	Fill; 10 YR 3/1 (very dark gray); loam; weak, fine, crumb structure; moist, very friable, weak consistency; slightly plastic; terrigenous origin; very abrupt, smooth lower boundary; includes SIHP #-7427 Feature 12
SIHP # -7427 Feature 12	55-60	Mortared cut basalt stone slab; possible building foundation remnant; SIHP #-7427 Feature 12
Ih	59-70	Fill; 10 YR 3/1 (very dark gray) with (C, 1) mottles 10 YR 8/2 (very pale brown); loam; weak, fine, crumb structure; moist, friable, weak consistency; slightly plastic; mixed origin; abrupt, smooth lower boundary
Ii	64-86	Fill; 7.5 YR 4/4 (brown); loam; weak, fine, crumb structure; moist, very friable, weak consistency; slightly plastic; mixed origin; diffuse, smooth lower boundary

Stratum	Depth (cmbs)	Description
Ij	62-75	Fill; 10 YR 4/4 (dark yellowish brown); gravelly sandy clay loam; weak, fine, crumb structure; moist, very friable, weak consistency; non-plastic; terrigenous origin
Ik	70-170	Fill; 2.5 Y 3/2 (very dark grayish brown); very gravelly sandy loam; weak, fine, crumb structure; moist, very friable, weak consistency; non-plastic; mixed origin; clear, wavy lower boundary; marine shell fragments
II	65-145	Fill; 10 YR 3/2 (very dark grayish brown) with mottles of 10 YR 8/2 (very pale brown); sandy loam; moderate, coarse, blocky structure; moist, firm, strong consistency; slightly plastic; clear, smooth lower boundary; contained ceramic fragments (collected), bottle glass (not collected)
II	141-220 (BOE)	Natural; 10 YR 4/2 (dark grayish brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; slightly plastic; mixed origin; abrupt, smooth lower boundary; contained glass bottle, rusted metal, glass (collected), charcoal flecks; previously disturbed natural sediment; component of SIHP #-7427

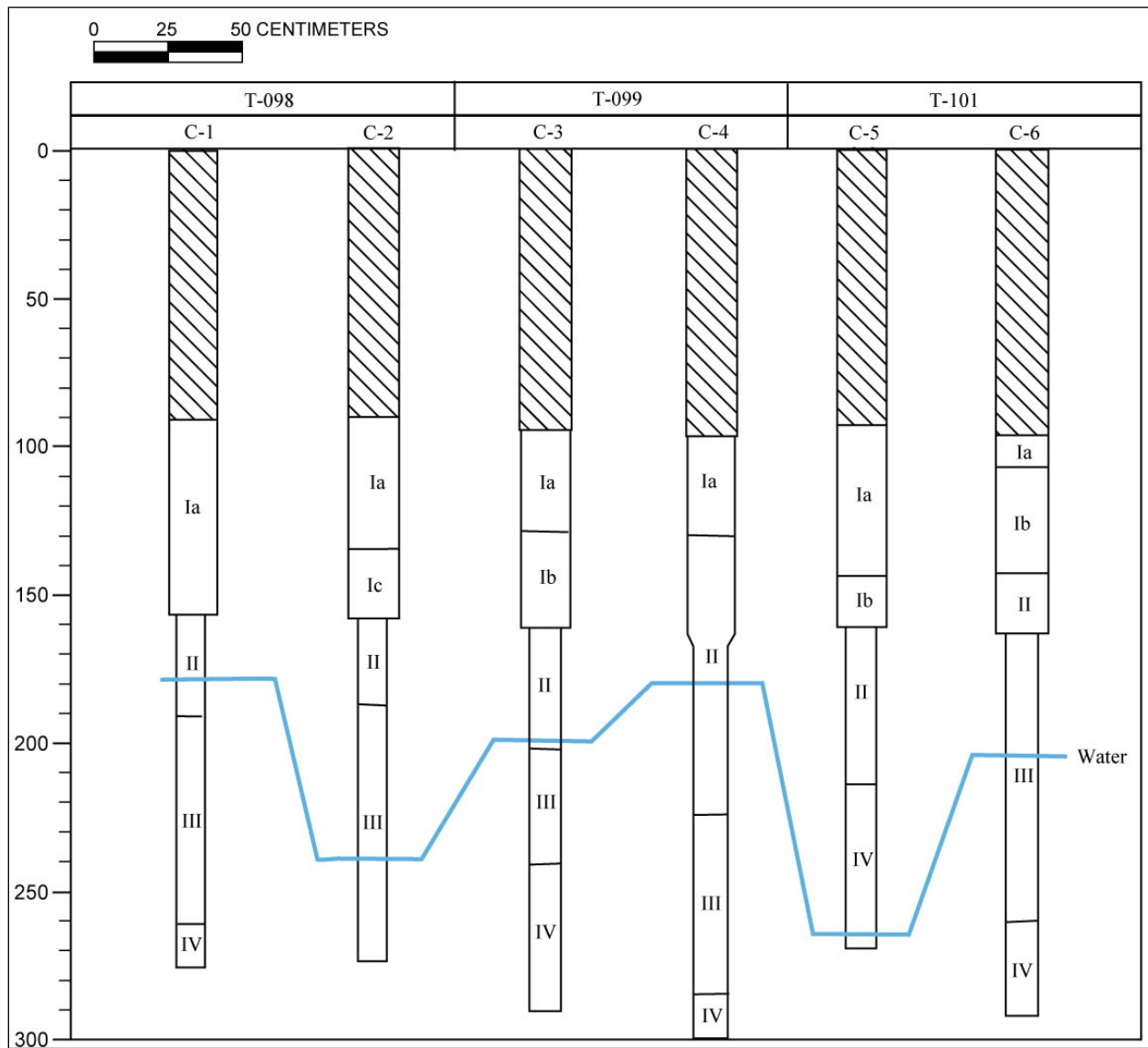


Figure 347. Stratigraphic profiles collected from C-1 to C-6 from T-098, T-099, and T-101 (note: hatched area represents drill through above strata and blue line represents the water table)



Table 73. C-1 through C-6 Stratigraphic Description

Stratum	Depth (cmbs)	Description
N/A	0-95	Drill Through
Ia	90-157	Fill; 10 YR 5/2 (grayish brown); extremely gravelly silty sand; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; contains 80% angular basalt gravel; possible basalt gravel base course
Ib	109-162	Fill; 10 YR 8/2 (very pale brown); very gravelly sandy loam; structureless, single-grain; moist, loose consistency; non-plastic; mixed origin; contains 40% angular coral gravel and sparse charcoal flecking; possible crushed coral fill
Ic	136-160	Fill; 10 YR 3/2 (very dark grayish brown); clay; structureless, massive; wet, sticky consistency; slightly plastic; terrigenous origin
II	130-225	Natural; 10 YR 3/2 (very dark grayish brown); sandy loam; weak, medium, crumb structure; moist, firm consistency; slightly plastic; mixed origin; contained charcoal flecking and shell fragments (not collected); subsurface culturally-enriched deposit; designated a component of SIHP #-7427
III	167-288	Natural; 10 YR 3/1 (very dark grey); loamy clay; strong, medium, crumb structure; moist, firm consistency; plastic; terrigenous origin; contained organic material (peat)
IV	215-300	Natural; decomposed coral shelf

Table 74. Features of SIHP # -7427

Feature	Test Excavation	Depth (mbs)	Description
1	T-096	0.30-1.10	Structural Remnant; in situ building foundation comprised of two courses of mortared, machine-made red brick overlying and secured to a poured concrete foundation atop dry-laid basalt boulders
2	T-096	0.27-0.43	Structural Remnant; in situ poured concrete slab
3	T-096	0.70	Human Remain; a single isolated human talus bone in backfill
4	T-097	0.35-1.00	Structural Remnants; in situ mortared, machine-made red brick wall overlying a poured concrete slab
5	T-097	0.50-0.65	Structural Remnant; in situ poured concrete slab that abuts Feature 4
6	T-097	0.90-1.36	Structural Remnant; in situ poured concrete slab underlying Feature 5
7	T-097	0.95-1.30	Structural Remnants; displaced, dry-stacked, subangular basalt cobbles overlying a basalt slab
8	T-098	0.45-1.05	Structural Remnants; in situ poured concrete slab and an adjacent in situ concrete wall
9	T-099	0.05-0.46	Structural Remnant; in situ concrete block overlying an in situ poured concrete slab
10	T-100	0.19-0.28	Structural Remnant; fragmented in situ poured concrete slab
11	T-100	0.24-0.50	Structural Remnant; in situ poured concrete drainage channel
12	T-100	0.55-0.60	Structural Remnant; in situ mortared, cut basalt pavement
13	T-101	0.10-0.28	Structural Remnant; in situ poured concrete slab
14	T-101	0.60-1.15	Refuse pit; contained late nineteenth century artifacts, charcoal, and faunal bone



Figure 348. SIHP # -7427 Feature 1 (wall and concrete slab remnants) within T-096, view to east



Figure 349. SIHP # -7427 Feature 2 (concrete slab) within T-096, view to southwest





Figure 350. SIHP # -7427 Feature 4 (red brick wall and concrete slab remnants) within T-097, view to southeast





Figure 351. SIHP # -7427 Feature 5 (concrete slab remnant) within T-097, view to northeast





Figure 352. SIHP # -7427 Features 5 and 6 (concrete slabs) within T-097, view to southeast



Figure 353. SIHP # -7427 Feature 7 (dry-stacked basalt cobbles atop concrete slab) within T-097, view to southwest



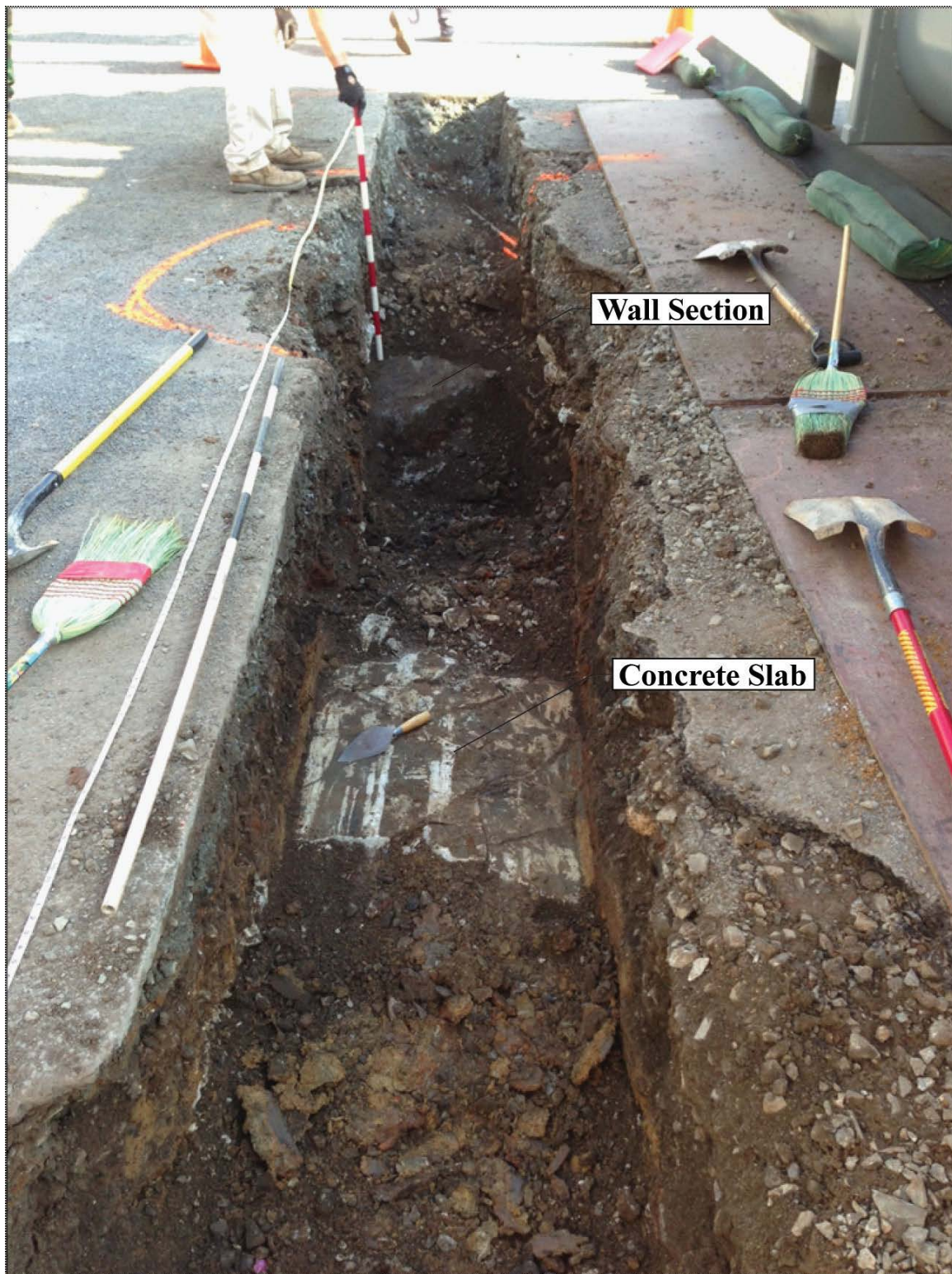


Figure 354. SIHP # -7427 Feature 8 (concrete slab and wall section) within T-098, view to southeast





Figure 355. SIHP # -7427 Feature 9 (concrete slab and concrete block) within T-099, view to north



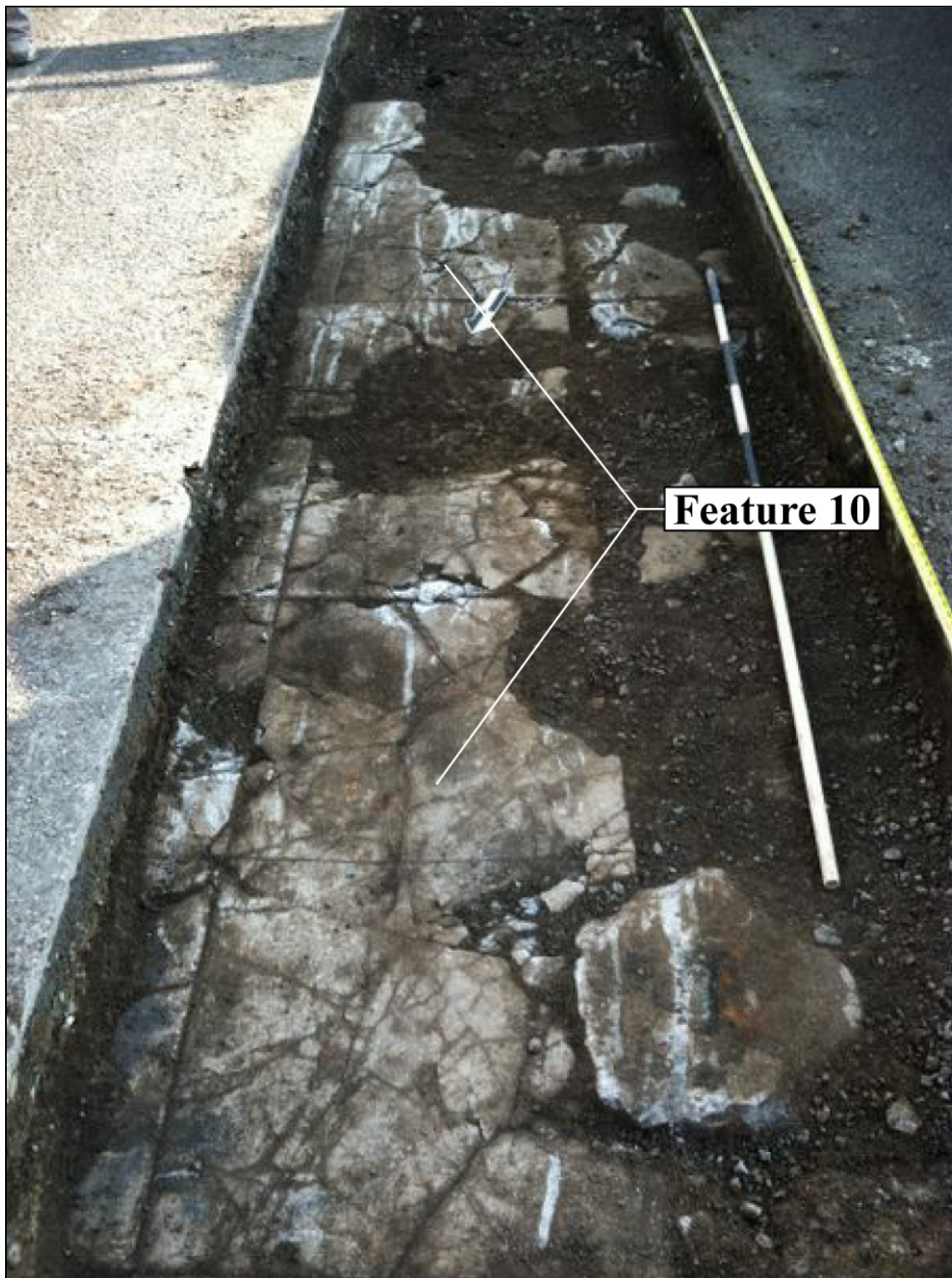


Figure 356. SIHP # -7427 Feature 10 (concrete slab) within T-100, view to south





Figure 357. SIHP # -7427 Feature 11 (concrete drain) within T-100, view to north

faunal bone was collected. Fourteen historic artifacts were collected from within SIHP #-7427 Feature 14. They include a Japanese cup with a “Dashed Line” transferprint Phoenix design, two Euro-American whiteware fragments, four bottles/bottle fragments dated between the 1860s and the 1920s, one bottle fragment embossed with a trademark used from 1885 to 1900, one bottle fragment dated between 1883 and 1896, one bottle fragment dated post-1800s, a bone bead, a fired brick, a metal strap, and a fragment of window glass. The sediment matrix within the pit was gravelly sandy loam. SIHP #-7427 Feature 14 is late nineteenth- to early twentieth- century historic refuse pit.

SIHP #-7427 consists of 12 buried structural remnants, 1 human talus bone, 1 historic refuse pit, and three culturally-enriched strata. The 12 buried structural remnants include SIHP #-7427 Features 1, 2, and 4 through 13, which were identified within T-096 through T-101. The human talus bone was identified as an isolated human skeletal element within the backfill pile of T-096 and was designated as SIHP #-7427 Feature 3. The talus bone was estimated to have originated from approximately 0.70 mbs from a very gravelly sandy loam fill layer (Stratum If). The historic refuse pit was identified within T-101 was designated SIHP #-7427 Feature 14. Three culturally-enriched fill strata were designated as components of SIHP #-7427: Strata Id, If and Ii in T-096. The natural sediment (Stratum II) was identified within T-096, T-097, T-100, T-101 and C-1 through C-6. Both Stratum II and the additional natural sediment (Stratum III) within T-097, were designated as components of SIHP #-7427.

At the time of Western contact, the area that comprises SIHP #-7427 was known as part of the settlement of Kou. Background research indicates that this coastal landscape consisted of house sites, agricultural fields, and gaming areas for the chiefs. Stratum II (and Stratum III in T-096), the culturally-enriched sandy loam or clay loam sediment identified within T-096, 097, 100, and 101 and C-1 through C-6, may correspond to the pre- and/or early post-Contact settlement of Kou. Kou rapidly evolved into a bustling port following Captain William Brown's Western discovery of Honolulu Harbor in 1793. Honolulu became more populated during the nineteenth century as the areas surrounding Honolulu Harbor increased in commercial importance. The buried structural remnants, historic refuse pit, associated culturally-enriched natural and fill strata, and datable artifacts within SIHP # -7427 are evidence of mid-nineteenth to early twentieth century habitation and commercial infrastructure development near Honolulu Harbor.

Based on the guidance of the National Register Bulletin No.15, SIHP # 50-80-14-7427 retains its integrity of location, materials, and workmanship. Based on the results of the current City Center archaeological inventory survey, CSH recommends that this cultural resource maintains sufficient integrity to support its significance under Criterion D (has yielded, or is likely to yield information important for research on prehistory or history) and E (has cultural significance to an ethnic group) of the Hawai'i Register. Additionally, this cultural resource meets Criterion D of the National Register, exclusively for its information potential.

SIHP # 50-80-14-7427 has provided information, and can potentially provide additional information, on nineteenth and twentieth century habitation at the previous settlement of Kou and historic development of Chinatown near Honolulu Harbor. The potential for additional research warrants the implementation of a data recovery program. The primary focus of data recovery at SIHP #-7427 will be on the in situ deposits present beneath the structural remnants in an effort to better define land use in the pre- and/or early post-Contact periods. Data recovery

will include exposing and mapping, in plan and profile, any additional buried structural remnants in an effort to correlate these remnants and associated fill strata with historic maps and specific historic events. Data recovery will involve screening efforts aimed at identifying any additional human skeletal remains that may be present at SIHP #-7427. In addition, data recovery will involve further excavation of in situ cultural deposits and features that may be identified as possible components of SIHP #-7427. Following the data recovery, archaeological monitoring will be conducted during construction to further collect data on the nature and distribution of additional buried structural remnants, the extent of culturally-enriched strata associated with SIHP # 7427, and related features through mapping, recordation, and sample collection. The previously-identified human remain associated with SIHP #50-80-14-7427, will be treated in accordance with HAR §13-300 and HRS §6E-43. In order to alleviate the project's effect on human burials, a project-specific burial treatment plan (a requirement of HAR §13-300) will be prepared for consideration of the OIBC and recognized descendants. The agreed upon treatment is preservation in place, the details of which will be documented in the burial treatment plan.



Figure 358. SIHP # -7427 Feature 12 (mortared cut-basalt pavement) within T-100, view to north





Figure 359. SIHP # -7427 Feature 13 (poured concrete slab) within T-101, view to southwest



Figure 360. SIHP # -7427 Feature 14 (historic refuse pit) within T-101, view to northwest



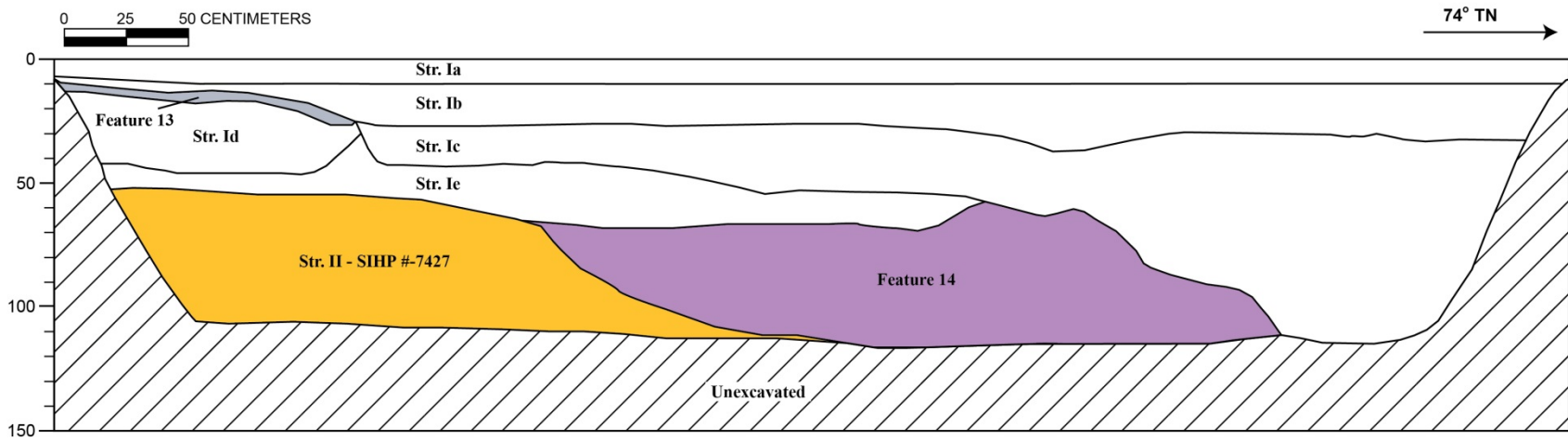


Figure 361. T-101 northwest wall profile

Table 75. T-101 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-11	Asphalt
Ib	11-37	Fill; 5 YR 4/1 (dark gray); extremely gravelly sandy loam; structureless, single-grain; dry loose consistency; non-plastic; terrigenous origin; abrupt, wavy lower boundary; contained concrete utility jacket; imported base course fill; insulator and brick (collected)
Ic	26-115	Fill; 2.5 YR 4/1 (dark reddish gray), with common, fine mottles of 2.5 YR 4/8 (red); clay; structureless, massive; moist, very firm consistency; very plastic; terrigenous origin; diffuse, irregular lower boundary; clay fill; bottle glass, porcelain insulator, faunal (collected); SIHP #-7427 Feature 13 overlies Stratum Id
SIHP #-7427 Feature 13	10-28	Building remnant consisting of an in situ poured concrete slab; likely a building floor or foundation
Id	15-47	Fill; 7.5 YR 3/2 (dark brown), with mottles of 7.5 YR 6/3 (light brown); sandy loam; structureless, single-grain; friable consistency; non-plastic; mixed origin; diffuse lower boundary; coral inclusion
Ie	30-69	Fill; 5 YR 3/1 (very dark gray), with mottles of 5 YR 8/1 (white); sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; clear lower boundary; contained red brick (not collected), charcoal flakes, fill deposit
SIHP #-7427 Feature 14	50-127	Fill; 10 YR 5/1 (gray), gravelly sandy loam; weak, fine, crumb structure; moist, loose consistency; non-plastic; mixed origin; lower boundary not observed; truncated by Strata Ic and Ie; intrusive into Stratum II; contained historic refuse; designated SIHP #-7427 Feature 14
II	52-112	Natural; 5 YR 2.5/1 (black); loamy clay; moderate, medium, blocky structure; moist, firm consistency; slightly plastic; mixed origin; lower boundary not visible; contains charcoal flaking; natural sediment; designated a component of SIHP #-7427

**5.3.16 SIHP #50-80-14-7428**

<b>FORMAL TYPE:</b>	Subsurface cultural deposit and historic building foundations
<b>FUNCTION:</b>	Habitation, Commercial Infrastructure
<b>PREVIOUS DOCUMENTATION:</b>	None
<b>AGE:</b>	Pre- and post-Contact
<b>NUMBER OF FEATURES:</b>	14
<b>TYPES OF FEATURES:</b>	12 pits (including 3 postmolds, and 9 indeterminate), 1 buried wall remnant, 1 builder's trench
<b>DISTRIBUTION:</b>	0.2 acres (total area)
<b>LOCATION:</b>	Located northeast ( <i>mauka</i> ) of Halekauwila Street between Punchbowl Street and Mililani Street (West Kaka'ako Geographic Zone)
<b>TAX MAP KEY:</b>	TMK [1] 2-1-026:001, 022; and [1] 2-1-026 (Halekauwila Street ROW por.)
<b>LAND JURISDICTION:</b>	State of Hawai'i and the City and County of Honolulu
<b>TEST EXCAVATIONS:</b>	T-119, T-119A, T-120, T-120A, and T-120B

SIHP #50-80-14-7428 is a newly-identified subsurface culturally-enriched deposit and fourteen associated features located northeast (*mauka*) of Halekauwila Street between Punchbowl Street and Mililani Street within the West Kaka'ako Geographic Zone (Figure 362). This archaeological cultural resource was identified within five test excavations (T-119, T-119A, T-120, T-120A, and T-120B) during the current City Center archaeological inventory survey.

The depositional sequence was similar in each of the five test excavations in which SIHP #-7428 was identified (Figure 363). The buried Late Pleistocene calcareous reef (coral reef) was identified at the base of excavation in T-119, T-119A, T-120A, and T-120B, and is presumed to be beneath the water table and base of excavation within T-120. Where present in the excavation sidewall, the coral reef was designated Stratum IV. Natural calcareous Jaucas sand was present at the base of the excavation in each of the five test excavations, overlying the coral shelf. The Jaucas sand was designated Stratum III.

A culturally-enriched A-horizon, exhibiting both pre- and post-Contact land usage, directly atop the natural Jaucas sand surface, was designated Stratum II. The texture of this A-horizon varied from loamy silt and loamy sand in T-119 and T-120 to sandy loam in T-119A and T-120A and sandy clay loam in T-120B. The culturally-enriched A-horizon was designated SIHP #50-80-14-7428.

Fourteen features were identified as components of SIHP #-7428 (Table 76). Of these, 12 (SIHP #-7428 Features 2–13) originated in the A-horizon and intruded into the underlying Jaucas sand. They consist of 3 postmolds and 9 indeterminate pits. Two additional features were identified in T-119 and T-119A. They are a buried basalt stone and mortar wall (SIHP #-7428 Feature 1) with an associated builder's trench (SIHP #-7428 Feature 1a).

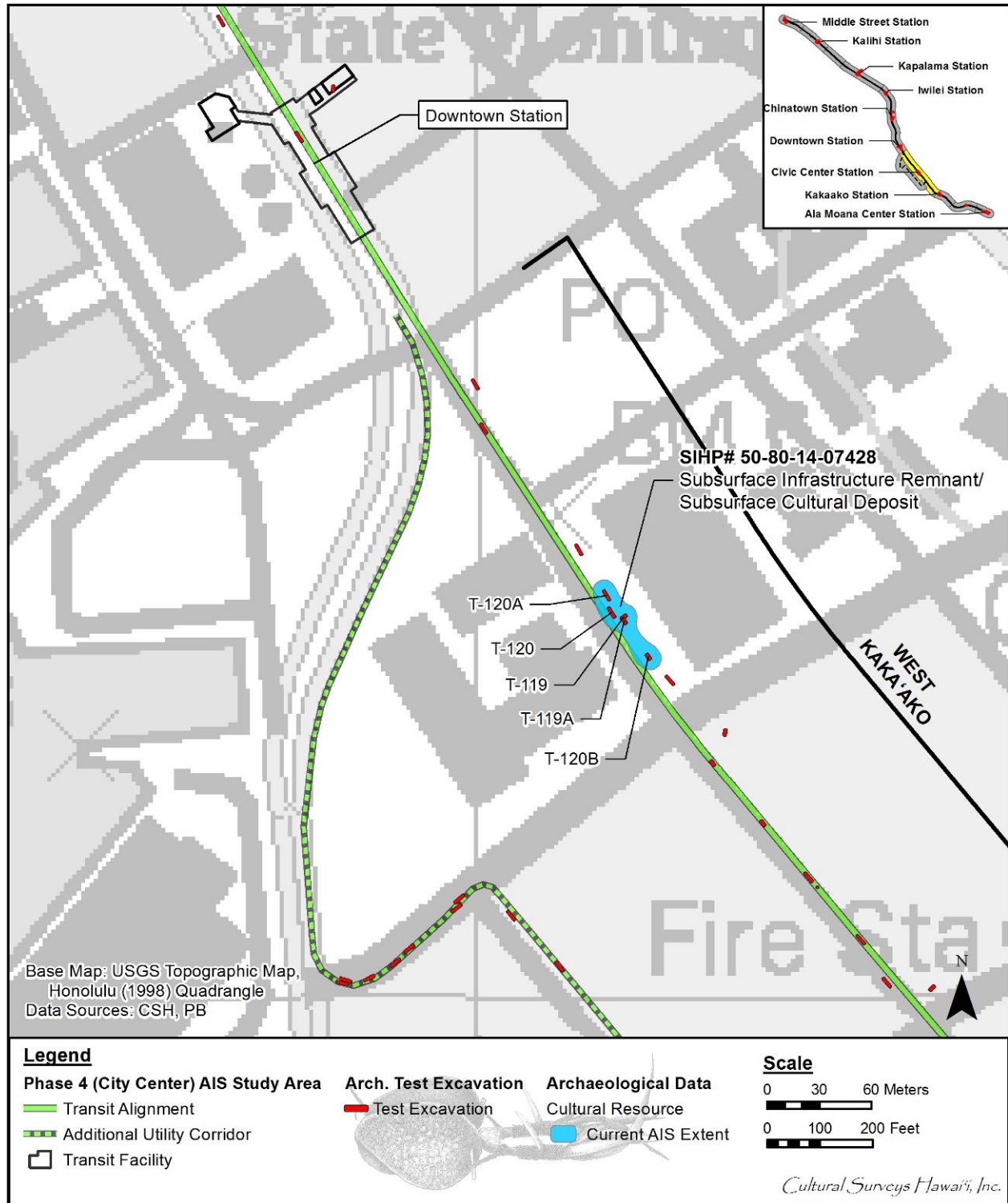


Figure 362. Location of subsurface cultural deposits (SIHP #-7428) in the West Kaka'ako Geographic Zone (Base Map: 1998 USGS Topographic Map of Honolulu)

Table 76. Archaeological features of SIHP #-7428 Documented During the Current AIS

Feature	Test Excavation	Depth (cmbs)	Radiocarbon Date (C14)	Type/Function	Contents
1	T-119, T-119A	130-190	-	Buried Wall Remnant/Structural Foundation	Historic wall constructed of basalt stone and mortar
1a	T-119A	47-168	AD 1160-1890 (78.2%) and AD 1800-1940 (65.6%)	Builder's Trench/Excavation	Builder's trench associated within the construction of Feature 1; contained charcoal ( <i>kolomona</i> , 'ōhi'a lehua, kukui, kōpiko, ipu, 'āheahea, 'āweoweo, and 'ōhi'a ai), naturally-occurring marine shell, marine shell midden, organics, ceramics, metal tag, possible bone pipe stem, bottle glass, metal, slag, vesicular basalt, coral gravel, and faunal bone ( <i>Canis lupus familiaris</i> , medium mammal, and fish)
2	T-120	112-129	-	Pit/Postmold	Charcoal, naturally-occurring marine shell, marine shell midden, faunal bone (shark tooth, fish)
3	T-120	112-116	-	Pit/Postmold	Charcoal, naturally-occurring marine shell, marine shell midden, and faunal bone (medium mammal, fish)
4	T-120	112-126	AD 1790-1940 (62.7%)	Pit/Indeterminate	Charcoal ( <i>kukui</i> , <i>kolomona</i> , <i>kōpiko</i> , roseapple/Java plum/'ōhi'a 'ai, hau, 'ilima, loulou, 'ākia ipu, pilo, akoko, 'ahakea, 'āheahea, 'āweoweo, 'ūlei), naturally-occurring marine shell, marine shell midden, organics, volcanic glass, basalt manuport fragment, and faunal remains (medium mammal, <i>Rattus</i> sp., fish)
5	T-120	110-118	AD 1810-1920 (67.1%)	Pit/Indeterminate	Charcoal ( <i>kukui</i> , <i>akoko</i> , 'ōhi'a lehua, hau, 'ilima, roseapple/Java plum/'ōhi'a 'ai, pilo), naturally-occurring marine shell, marine shell midden, organics, volcanic glass, burned kukui nut shell, and faunal bone (medium mammal, burned <i>Canis lupus familiaris</i> , burned Aves, <i>Rattus</i> sp., fish,



Feature	Test Excavation	Depth (cmbs)	Radiocarbon Date (C14)	Type/Function	Contents
					shark tooth)
6	T-120	107-120	-	Pit/Indeterminate	Charcoal ( <i>kukui</i> , fern, <i>kolomona</i> , 'ilima, 'āheahea, 'āweoweo, 'a'ali'i), burned <i>kukui</i> nut shell, organics, basalt fragment, fire-cracked rock, volcanic glass, plastic filament, and faunal bone (three shark teeth, burned <i>Canis lupus familiaris</i> , <i>Sus scrofa</i> , <i>Rattus</i> sp., fish)
7	T-120	104-107	AD 1800-1930 (68.9%)	Pit/Indeterminate	Charcoal, naturally-occurring marine shell, marine shell midden, fire-cracked rock, vesicular basalt, and faunal bone ( <i>Canis lupus familiaris</i> , <i>Rattus</i> sp., shark tooth, fish)
8	T-120	104-117	-	Pit/Indeterminate	Charcoal, naturally-occurring marine shell, marine shell midden, burned <i>kukui</i> nut shell, and faunal bone ( <i>Canis lupus familiaris</i> , <i>Rattus</i> sp., shark tooth, fish)
9	T-120A	118-136	AD 1660-1890 (77.3%)	Pit/Indeterminate	Charcoal ( <i>kōpiko</i> , <i>hau</i> , <i>pilo</i> ), naturally-occurring marine shell, and marine shell midden
10	T-120A	128-137	AD 1660-1890 (77.3%)	Pit/Postmold	Charcoal ('āheahea, 'āweoweo, roseapple/Java plum/'ōhi'a 'ai, <i>kukui</i> , <i>lama</i> , <i>kolomona</i> , <i>kōpiko</i> , 'a'ali'i), shell midden, <i>kukui</i> nut shell, coral fragments, and faunal bone (fish)
11	T-120A	130-140	-	Pit/Indeterminate	Charcoal, naturally-occurring marine shell, marine shell midden, organics, glass, ceramic fragment, water-worn basalt cobble, and faunal bone (medium mammal, shark tooth)
12	T-120A	128-132	AD 1720-1820 (50.7%)	Pit/Indeterminate	Charcoal ( <i>akoko</i> , <i>kolomona</i> , 'a'ali'i, 'ōhi'a lehua, 'ulu, palm, <i>kukui</i> , grass), naturally-occurring marine shell, marine shell midden, volcanic glass, and fire-cracked rock
13	T-120A	128-132	-	Pit/Indeterminate	Charcoal and marine shell midden

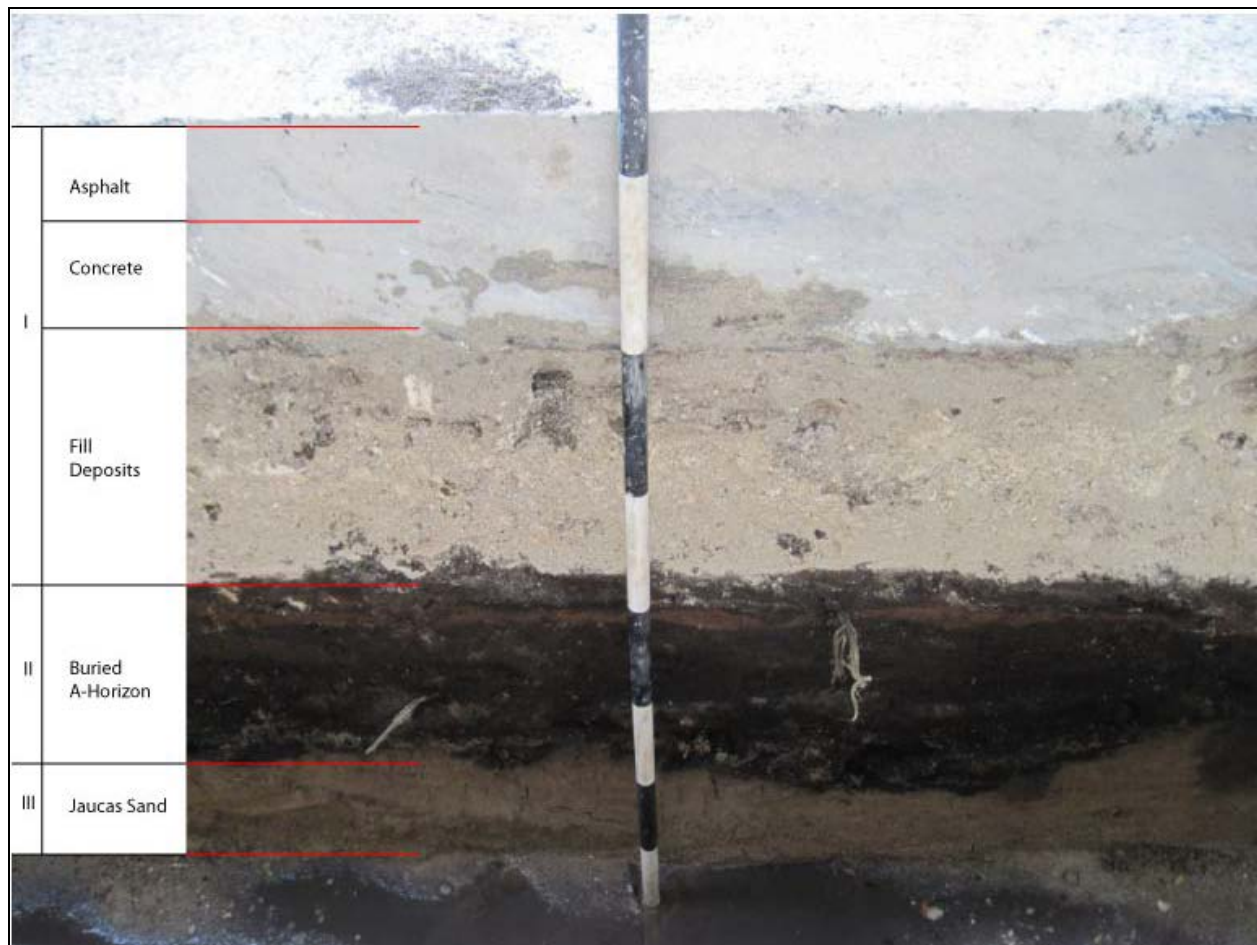


Figure 363. T-120 northeast wall profile, showing the general depositional sequence observed in T-120 and nearby T-119, T-119A, T-120A, and T-120B, view to northeast

**SIHP #-7428 Feature 1** was identified within T-119 and T-119A (Figure 364, Figure 365, Table 77, Figure 366 through Figure 368, and Table 78). SIHP #-7428 Feature 1 was the remnants of a historic wall constructed of basalt stone and mortar. Sections of this wall were observed down to the coral shelf, at depths of 1.30-1.90 mbs (T-119) and 0.47-1.68 mbs (T-119A). In both test excavations, the wall was observed below multiple fill layers and a culturally enriched A-horizon. The physical dimensions of the wall in T-119 were 0.6 m high, 0.5 m wide, and 1.0 m in length, extending into both the northeast and southwest walls. The physical dimensions of the portion of wall in T-119A were approximately 1.20 m high, 0.20 m wide, and 2.60 m in length. Several red brick fragments dated ca. 1807–1860 were collected from the fill deposits directly overlying the wall in T-119 (Stratum Ic) and T-119A (Stratum Id). In addition to these red bricks, two fragments of Asian dinnerware (Acc. # 119A-A-1 and A-2) were collected from Stratum Id in T-119A at depths of 0.40 and 0.90 mbs. The wall appears to correspond with the *makai* foundation a storage warehouse depicted on the 1914 Sanborn fire insurance map (Figure 369). SIHP #7428 Feature 1 is a buried wall remnant.

**SIHP #-7428 Feature 1a** was identified in T-119A. This feature is an infilled trench of mixed sediment (sandy loam) containing historic material, shell midden, and faunal remains. The trench abuts the SIHP #-7428 Feature 1 wall. The northern portion of the wall was originally recorded within T-119. Feature 1a originates at 0.47 mbs at the interface of Strata Ib and Ic and terminates at 1.68 mbs at the coral shelf (see Figure 368 and Table 78). The exposed dimensions of SIHP #-7428 Feature 1a were 2.85 m in length and 0.70 m in width. The trench, however, extends beyond the northeast profile wall. Artifacts collected from the trench include two Chinese porcelain flatware vessels. One exhibits an “Om” motif (Sino-Sanskrit Om) and the other exhibits an “Allah” (Sino-Islamic Allah) motif. Also collected from inside the trench was a metal tag with a “Body Fisher” logo from the Fisher Body (automobile) Company, dating post-1908. A 3.0-liter bulk sample was collected from within SIHP #-7428 Feature 1a at 1.25–1.55 mbs. The sample yielded charcoal (2.8 g), shell midden (11.6 g), naturally-occurring shell (0.3 g) and medium mammal remains (0.1 g). SIHP #7428 Feature 1a was interpreted as an infilled builder’s trench.

**SIHP #-7428 Feature 2** was identified within T-120. This pit originated at the base of Stratum II at 1.12 mbs and terminated at 1.29 mbs (Figure 371 and Table 79). The feature was circular in plan view, measured 0.25 m in diameter, and extended into the northeast sidewall. The sediment matrix within the pit was fine loamy sand with similar characteristics to Stratum II. An 11.4-liter screened sample was collected from SIHP #-7428 Feature 2 at 1.12-1.29 mbs. The sample contained charcoal (1.9 g), naturally-occurring shell (10.5 g), fish remains (0.1 g), a shark tooth (0.1 g), and shell midden (8.2 g). SIHP #7428 Feature 2 was interpreted as a possible postmold.

**SIHP #-7428 Feature 3** was identified within T-120. This pit originated at the base of Stratum II at 1.12 mbs and terminated at 1.16 mbs (see Figure 371, Figure 372, and Table 79). The feature was circular in plan view. It measured 0.4 m long by 0.15 m wide and extended into the northeast sidewall. The sediment matrix within the pit was fine loamy sand with similar characteristics to Stratum II. An 11.4-liter screened sample was collected from SIHP #-7428 Feature 3 at 1.12-1.16 mbs. The sample yielded charcoal (6.9 g), naturally-occurring shell (1.8 g), fish remains (0.1 g), medium mammal remains (0.1 g), and shell midden (6.4 g). SIHP #7428 Feature 3 was interpreted as a possible postmold.



Figure 364. SIHP #-7427 Feature 1, a portion of the basalt stone and mortar wall within T-119, view to southwest

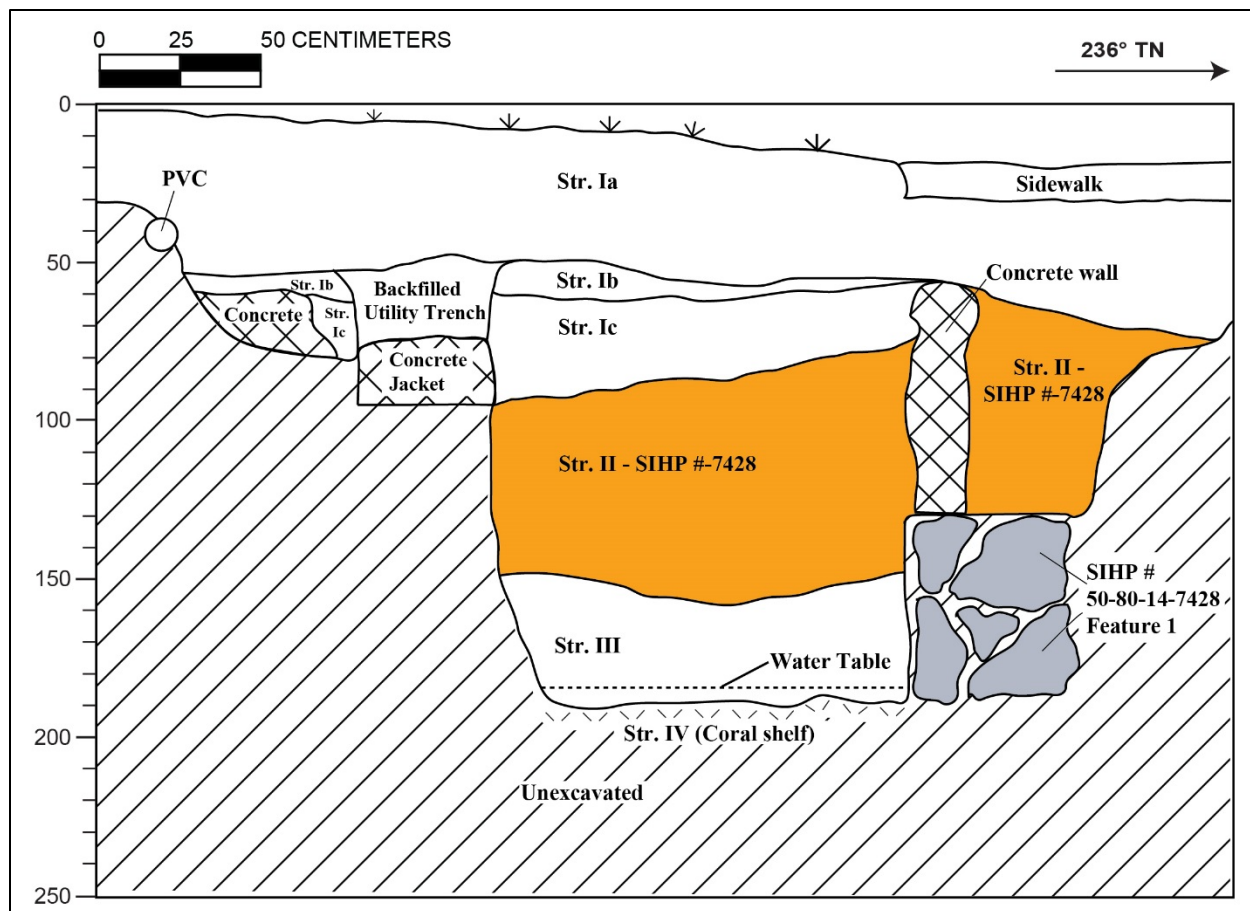


Figure 365. T-119 northwest wall profile, showing the basalt stone and mortar wall, SIHP #-7428 Feature 1



Table 77. T-119 Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0–75	Fill; 7.5 YR 2.5/2 (very dark brown); silty clay; moderate, medium to coarse, blocky structure; moist, firm consistency; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; common, fine roots; landscape, top soil
Utility	30–95	PVC pipe, modern concrete wall, utility trench, and concrete jackets
Ib	50–60	Fill; 10 YR 7/4 (very pale brown); very gravelly sandy loam; weak, fine, crumb structure; moist, loose consistency; non-plastic; abrupt, smooth lower boundary; crushed coral fill
Ic	60–95	Fill; 10 YR 6/1 (gray); gravelly sand; weak, medium crumb structure; dry, loose, strong consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; red bricks; pea pebble fill, cement
II	65–157	Natural; 10 YR 2/2 (very dark brown); loamy silt; weak, fine crumb structure; moist, loose consistency; non-plastic; terrigenous origin; clear, smooth lower boundary; fire-cracked rock, charcoal staining, cane slag, marine shell midden; re-worked cultural layer, designated a component of SIHP #-7428
SIHP #-7428 Feature 1	130–190	Historic mortared basalt stone wall; SIHP #-7428 Feature 1
III	145–190	Natural; 10 YR 5/4 (yellowish brown); medium sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; natural sand over coral shelf, water table
IV	190 (BOE)	Natural; 10 YR 7/4 (very pale brown); bedrock-limestone; structureless, massive; moist, weakly to strongly cemented; discontinuous consistency; non-plastic; marine origin; lower boundary not observed; Pleistocene coral shelf



Figure 366. SIHP #-7428 Feature 1, basalt stone and mortar wall within T-119A, view to northwest



Figure 367. SIHP #-7428 Feature 1, basalt stones in T-119, view to northeast

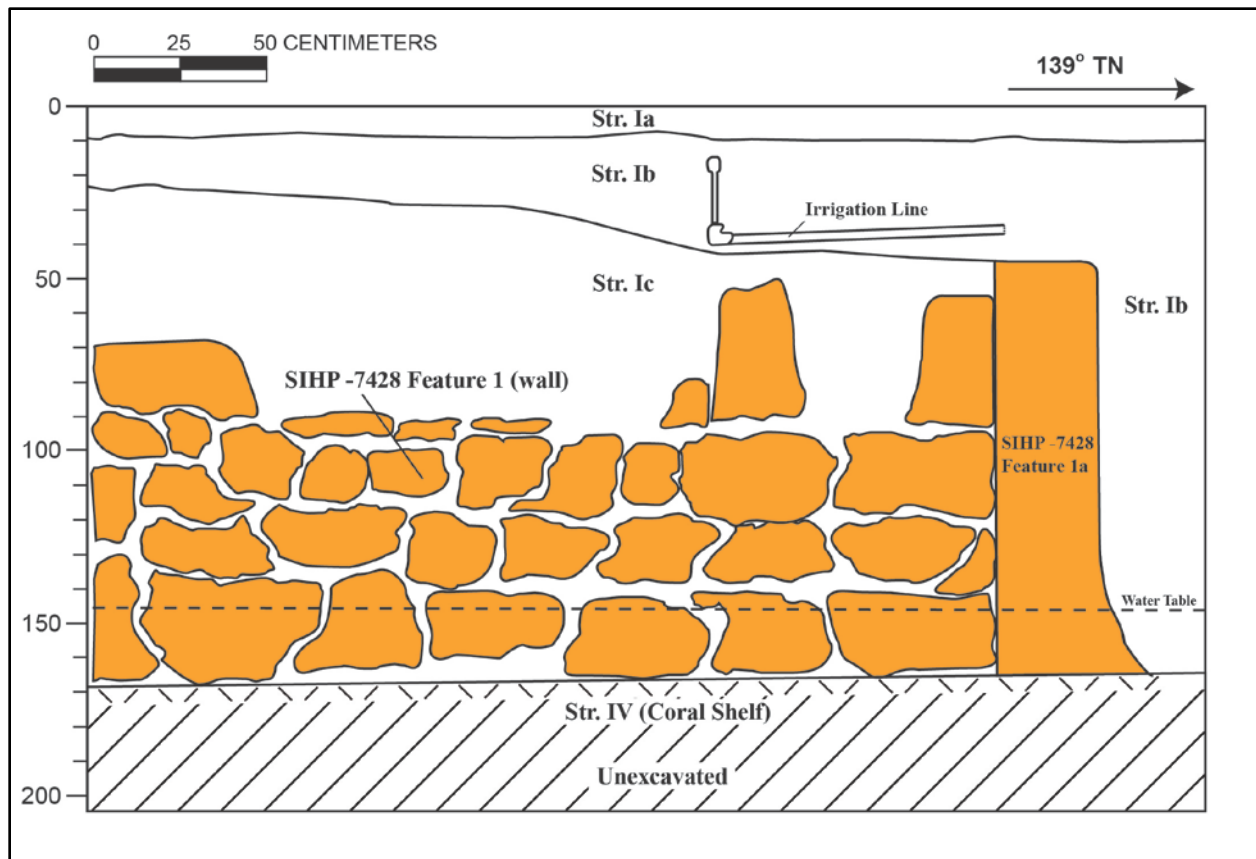


Figure 368. T-119A northeast profile showing SIHP # -7428 Features 1 and 1a

Table 78. T-119A Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-10	Fill; 10 YR 2/2 (very dry brown); loam; weak, medium, granular structure; dry, weakly coherent consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; few fine to coarse roots; imported fill, basalt gravel, inclusions
Ib	10-165	Fill; 10 YR 3/2 (very dark gray brown); loam; weak, medium, granular structure; dry, weakly coherent consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; few, fine to coarse roots; contained irrigation line; imported fill, basalt gravel inclusions
Ic	25-90	Fill; 10 YR 5/3 (brown); gravelly, medium sand; structureless, single-grain; loose, dry consistency; non-plastic; marine origin; abrupt, smooth lower boundary; crushed coral and sand fill
SIHP #-7428 Feature 1	47-165	Historic mortared basalt boulder wall; SIHP #-7428 Feature 1

Stratum	Depth (cmbs)	Description
SIHP #-7428 Feature 1a	45-165	Builders trench; 10 YR 3/2 (very dark grayish brown); sandy loam; weak, medium, granular structure; moist, loose consistency; non-plastic; terrigenous origin; abrupt lower boundary; few fine, medium and coarse roots; contained ceramics , a metal tag (collected), and red brick (not collected);sample contained charcoal, marine shell midden , naturally-occurring shell, organics, burned bottle glass, rusted metal fragments, vesicular basalt, coral gravel, faunal ( <i>Canis lupus familiaris</i> and <i>Pervagor spilosoma</i> (Fantail Filefish); infilled builders trench consisting of likely locally procured A-horizon utilized as fill; SIHP #-7428 Feature 1a
IV	165 (BOE)	Natural; 10 YR 7/4 (very pale brown); bedrock-limestone; structureless, massive; moist, weakly to strongly cemented; discontinuous consistency; non-plastic; marine origin; lower boundary not observed; Pleistocene coral shelf



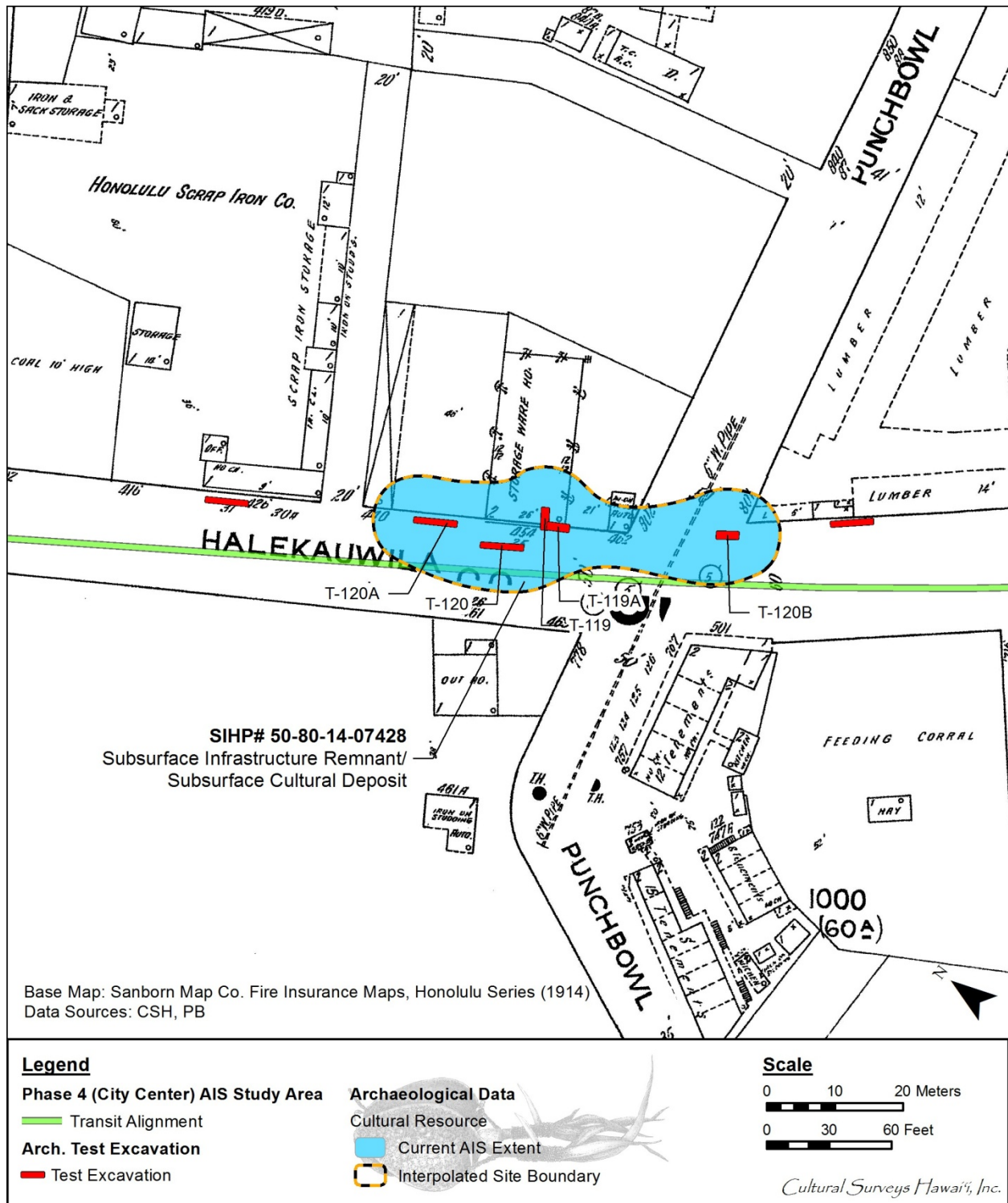


Figure 369. Portion of the 1914 Sanborn Fire Insurance Map depicting the relationship between the wall remnant (SIHP #7428 Feature 1) and associated builder's trench (SIHP #7428 Feature Ia) within T-119 and T-119A and the southwestern edge of a former storage warehouse



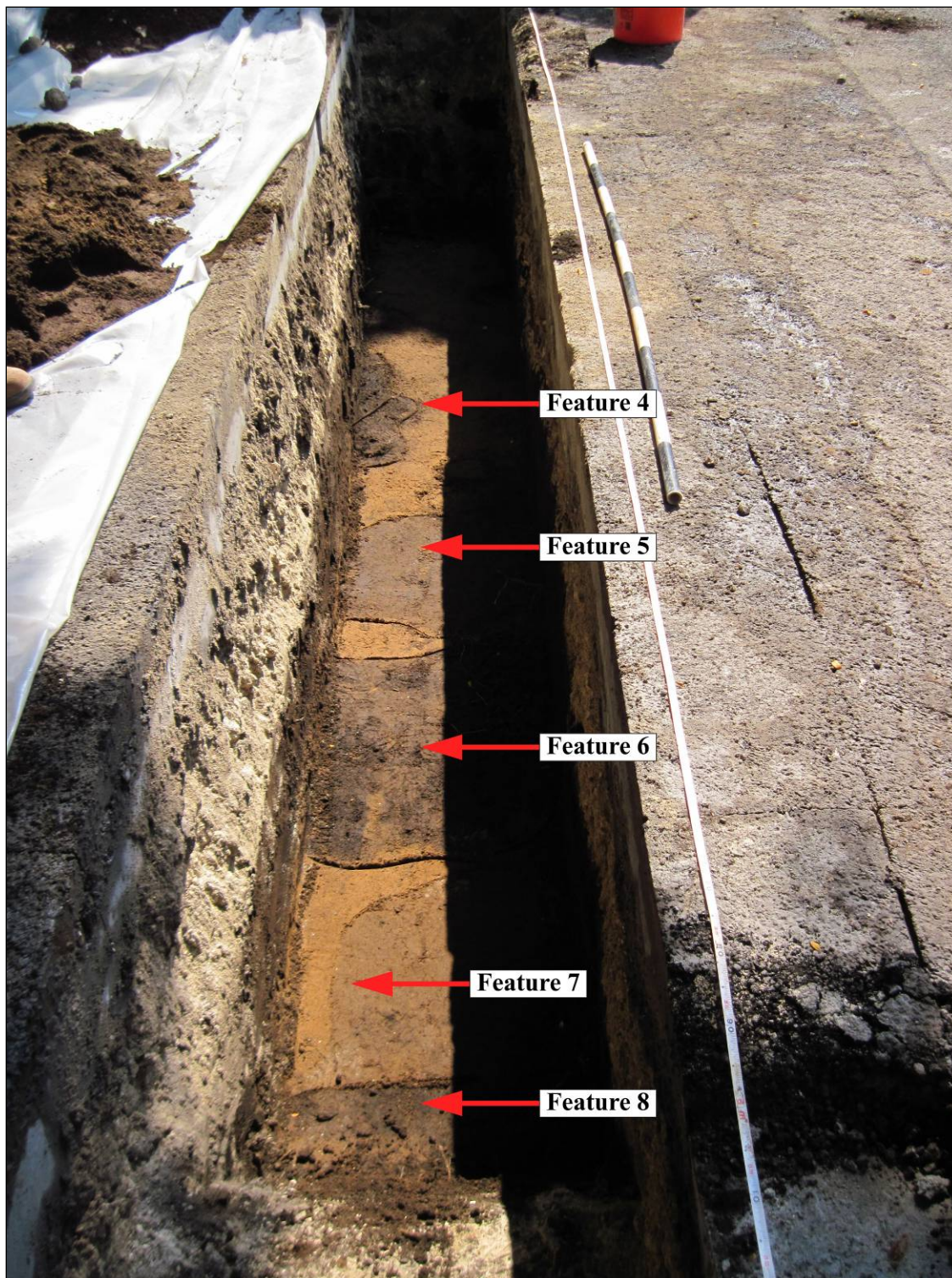


Figure 370. Overview of T-120 showing SIHP # -7428 Features 4–8, view to southeast





Figure 371. T-120 northeast wall profile, view to east

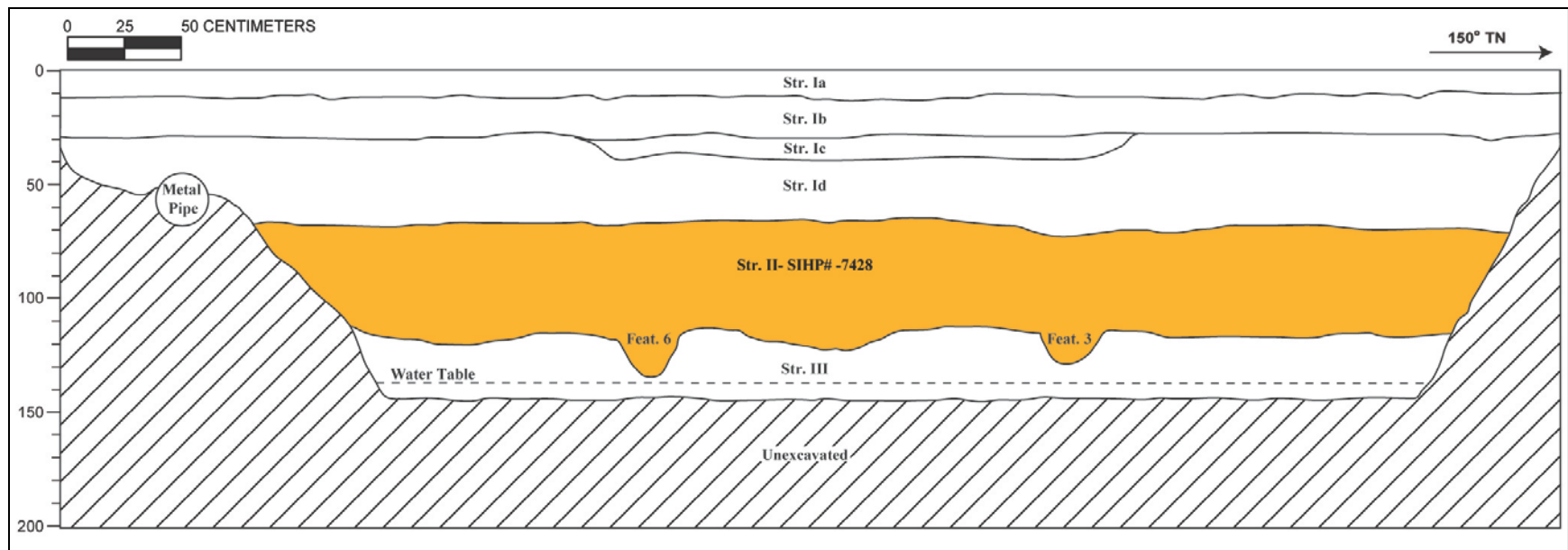


Figure 372. T-120 northeast wall profile

Table 79. T-120 Stratigraphic Description, northeast wall

Stratum	Depth (cmbs)	Description
Ia	0–14	Asphalt
Ib	14–30	Concrete
Ic	30–40	Fill; 10 YR 4/1 (dark gray); gravelly sandy clay; weak, fine, crumb structure; moist, friable consistency; plastic; mixed origin; clear, broken/discontinuous lower boundary; fill, crushed coral gravel
Id	30–73	Fill; 10 YR 7/3 (very pale brown); extremely gravelly sand; structureless, single-grain; moist, friable consistency; non-plastic; marine origin; very abrupt, smooth lower boundary
II	65–135	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; wavy lower boundary; common, fine, medium roots; contained Features 2-8, faunal remains, ceramic, marine shells (collected); buried A-horizon; designated a component of SIHP # -7428
SIHP #-7428 Feature 2	112–129	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; possible postmold originating in Stratum II; sample contained charcoal, marine shell midden, fish bone, a shark tooth, and naturally-occurring marine shell; SIHP #-7428 Feature 2
SIHP #-7428 Feature 3	112–116	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature originating in Stratum II; sample contained charcoal, marine shell midden, fish bone, medium mammal bone, and naturally-occurring marine shell; SIHP #-7428 Feature 3
SIHP #-7428 Feature 4	112–126	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature originating in Stratum II; sample contained one piece of volcanic glass debitage, a basalt manuport fragment, charcoal, marine shell midden, fish bone (including <i>Pervagor spilosoma</i> , or Fantail Filefish), rat bone, medium mammal bone, and naturally-occurring marine shell; SIHP #-7428 Feature 4
SIHP #-7428 Feature 5	110–118	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature originating in Stratum II; sample contained one piece of volcanic glass debitage, charcoal, marine shell midden, pig bone, medium mammal bone, dog bone, rat bone, bird bone, fish bone ( <i>Pervagor spilosoma</i> , or Fantail Filefish, and <i>Scarus perspicillatus</i> , or Spectacled parrotfish), a shark tooth, burned <i>kukui</i> nutshell, and naturally-occurring marine shell; SIHP #-7428 Feature 5



SIHP #- 7428 Feature 6	107–120	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature and sub-feature originating in Stratum II; sample contained one piece of volcanic glass debitage, basalt, charcoal, marine shell midden, three shark teeth, pig bone, dog bone, rat bone, fish bone ( <i>Pervagor spilosoma</i> , or Fantail Filefish), burned <i>kukui</i> nutshell, fire-cracked rock, a plastic filament, and naturally-occurring marine shell; SIHP #-7428 Feature 6
SIHP #- 7428 Feature 7	104–107	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature originating in Stratum II; sample contained charcoal, marine shell midden, dog bone, rat bone, a shark tooth, fish bone ( <i>Pervagor spilosoma</i> , or Fantail Filefish, and <i>Bilunulatus alboteniatus</i> , or Hawaiian hogfish), fire-cracked rock, and naturally-occurring marine shell; SIHP #-7428 Feature 7
SIHP #- 7428 Feature 8	104–117	Natural; 10 YR 2/2 (very dark brown); fine loamy sand; weak, fine, crumb structure; moist, very friable consistency; non-plastic; mixed origin; pit feature originating in Stratum II; sample contained charcoal, marine shell midden, dog bone, rat bone, a shark tooth, fish bone ( <i>Pervagor spilosoma</i> , or Fantail Filefish), burned <i>kukui</i> nutshell, and naturally-occurring marine shell; SIHP #-7428 Feature 8
III	113–145 (BOE)	Natural; 10 YR 5/4 (yellowish brown); fine grain sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; natural Jaucas sand

**SIHP #-7428 Feature 4** was identified within T-120. It originated from the base of Stratum II at 1.12 mbs and terminated at 1.26 mbs (Figure 370 to Figure 372 and Table 79). The pit was irregularly shaped in plan view, measured 0.95 m long by 0.22 m wide, and extended into the northeast sidewall. The sediment matrix within the pit was fine loamy sand with similar characteristics to Stratum II. An 11.4-liter screened sample was collected from SIHP #-7428 Feature 4 at 1.12-1.26 mbs. The sample yielded charcoal (7.2 g), naturally-occurring shell (18.3 g), small roots (0.1 g), a piece of volcanic glass debitage (0.3 g), a basalt manuport fragment (0.2 g), medium mammal remains (0.9 g), *Rattus* sp. remains (0.1 g), unidentified fish remains (0.3 g), Monacanthidae *Pervagor spilosoma* (Fantail Filefish; 0.1 g), and shell midden (50.6 g). SIHP #-7428 Feature 4 was interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 5** was identified within T-120 originating from the base of Stratum II at 1.10 mbs and terminating at 1.18 mbs (see Figure 370 to Figure 372 and Table 79). The pit was irregularly shaped in plan view, measured 0.65 m long by more than 0.75 m wide, and extended into the northeast and southwest excavation sidewalls. The sediment matrix within the pit was fine loamy sand with similar characteristics to Stratum II. An 18.9-liter screened sample collected from SIHP #-7428 Feature 5 yielded charcoal (66.2 g), naturally-occurring marine shell (1.3 g), volcanic glass (1.5 g), burned *kukui* (1.6 g), roots and leaves (0.4 g), medium mammal long bone fragments (2.2 g), burned *Canis lupus familiaris* long bone (0.6 g), burned Aves remains (0.1 g), *Rattus* sp. remains (0.1 g), *Scarus perspicillatus* (Parrot fish) and *Pervagor spilosoma* (Fantail file fish ) (0.3 g), a shark tooth (0.1 g), and marine shell midden (64.3 g). SIHP #-7428 Feature 5 was interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 6** was identified within T-120 originating from the base of Stratum II at 1.07 mbs and terminating at 1.20 mbs. The pit contained a circular component that extend into the northeast wall between 1.17–1.37 mbs (see Figure 370 to Figure 372 and Table 79). SIHP #-7428 Feature 6 was irregularly shaped in plan view. It measured 0.85 m long by more than 0.75 m wide and extended into the northeast and southwest excavation sidewalls. The sediment matrix of within the pit was fine loamy sand with similar characteristics to Stratum II. An 18.9-liter screened sample collected from SIHP #-7428 Feature 6 contained charcoal (28.1 g), burned *kukui* nut shell (1.8 g), organic filaments (0.5 g), a basalt fragment (3.9 g), volcanic glass debitage (<0.1 g), a plastic filament (<0.1 g), fire-cracked rock fragments (148.3 g), *Canis lupus familiaris* juvenile molars, metatarsus, burned fragments (8.3 g), *Sus scrofa* molar fragments (0.5 g), *Rattus* sp. mandible, long bone, and other fragments (0.9 g), *Pervagor spilosoma* (Fantail Filefish; 5.5 g), and marine marine shell midden (236.5 g). SIHP #-7428 Feature 6 was interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 7** was identified within T-120. It originated from the base of Stratum II at 1.04 mbs and terminated at 1.07 mbs (see Figure 370 to Figure 372 and Table 79). The pit was irregularly shaped in plan view, measured 0.5 m long by more than 0.53 m wide, and extended into the southwest sidewall. The sediment matrix within the feature was fine loamy sand with similar characteristics to Stratum II. An 18.9-liter screened sample collected from SIHP #-7428 Feature 7 contained charcoal (8.6 g), naturally-occurring shell (3.3 g), fire-cracked rock and vesicular basalt (17.9 g), *Canis lupus familiaris* molar and long bone fragments (1.2 g), *Rattus* sp. maxilla and long bone fragments (0.1 g), a shark tooth (0.1 g), *Bilunulatus alboteniatus* (Hawaiian hogfish) and *Pervagor spilosoma* (Fantail Filefish; 0.6 g), and marine shell midden (129.5 g). SIHP #-7428 Feature 7 was interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 8** was identified within T-120 originating from the base of Stratum II at 1.04 mbs and terminating at 1.17 mbs (see Figure 370 to Figure 372 and Table 79). The pit was irregularly shaped in plan, and measured 0.45 m long by more than 0.75 m wide, and extended into the northeast and southwest sidewalls. The sediment matrix within the feature was fine loamy sand with similar characteristics to Stratum II. An 18.9-liter screened sample collected from SIHP #-7428 Feature 8 yielded charcoal (15.1 g), naturally-occurring marine shell (2.1 g), burned *kukui* nut (3.6 g), *Canis lupus familiaris* (13.6 g), *Rattus* sp. (0.1 g), a shark tooth (0.1 g), *Pervagor spilosoma* (Fantail Filefish) and *Scarus* sp. (Parrotfish; 0.3 g), and marine shell midden (38.0 g). SIHP #-7428 Feature 8 was interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 9** was identified within T-120A originating from the base of Stratum II at 1.18 mbs and terminating at 1.36 mbs (Figure 373 to Figure 375 and Table 80). The pit was oval shaped in plan, measured 0.30 m by more than 0.15 m, and extended into the northeast side wall of T-120A. The sediment matrix within the feature was gravelly sandy loam with similar characteristics to Stratum II. A 1-liter screened sample collected from SIHP #-7428 Feature 9 contained charcoal (0.3 g), marine shell midden (1.9 g), and naturally-occurring marine shell (0.4 g). SIHP #-7428 Feature 9 is interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 10** was identified within T-120A originating from the base of Stratum II at 1.28 mbs and terminating at 1.37 mbs (see Figure 373 to Figure 375 and Table 80). The pit was circular in plan and measured 0.25 m in diameter. The sediment matrix within the pit was gravelly sandy loam with similar characteristics to Stratum II. A 3-liter bulk sample collected from SIHP #-7428 Feature 10 contained charcoal (2.9 g), marine shell midden (10.5 g), *kukui* nutshell (0.1 g), fish fragments (2.2 g), and coral fragments (12.8 g). SIHP #-7428 Feature 10 is interpreted as a pit of indeterminate function or a possible postmold.

**SIHP #-7428 Feature 11** was identified within T-120A. It originated from the base of Stratum II at 1.30 mbs and terminated at 1.40 mbs (see Figure 373 to Figure 375 and Table 80). The pit was linear in shape in plan view, measured 0.67 m long by more than 0.65 m wide, and extended into both the northeast and southwest excavations sidewalls. The sediment matrix within the feature was gravelly sandy loam with similar characteristics to Stratum II. A 6-liter bulk sample and a 9.5-liter screened sample collected from SIHP #-7428 Feature 11 collectively yielded charcoal (45.1 g), marine shell midden (12.2 g) naturally-occurring marine shell (0.1 g), roots (1.2 g), glass (0.2 g), a white ceramic fragment (14.1 g), medium mammal remains (0.3 g), a shark tooth (0.1 g), and a basalt water worn cobble (18.8 g). SIHP #-7428 Feature 11 is interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 12** was identified within T-120A originating from the base of Stratum II at 1.28 mbs and terminating at 1.32 mbs (see Figure 373 to Figure 375 and Table 80). The pit was irregular shaped in plan. It measured 1.75 m in length by more than 0.40 m wide and extended into the southwest excavation sidewall. The sediment matrix within the feature was gravelly sandy loam with similar characteristics to Stratum II. A 2-liter bulk sample was collected from SIHP #-7428 Feature 12. It contained charcoal (16.1 g), marine shell midden (37.7 g), naturally-occurring marine shell (1.8 g), volcanic glass (0.1 g), and fire-cracked rock (17.7 g). SIHP #-7428 Feature 12 is interpreted as a pit of indeterminate function.

**SIHP #-7428 Feature 13** was identified within T-120A. The pit originated the base of Stratum II at 1.28 mbs and terminated at 1.32 mbs (see Figure 373 to Figure 375 and Table 80). The circular pit measured approximately 0.15 m in diameter and slightly extended into the northeast



Figure 373. Overview of T-120A showing SIHP # -7428 Features 9 through 13, view to southeast





Figure 374. T-120A northeast wall profile, view to southeast

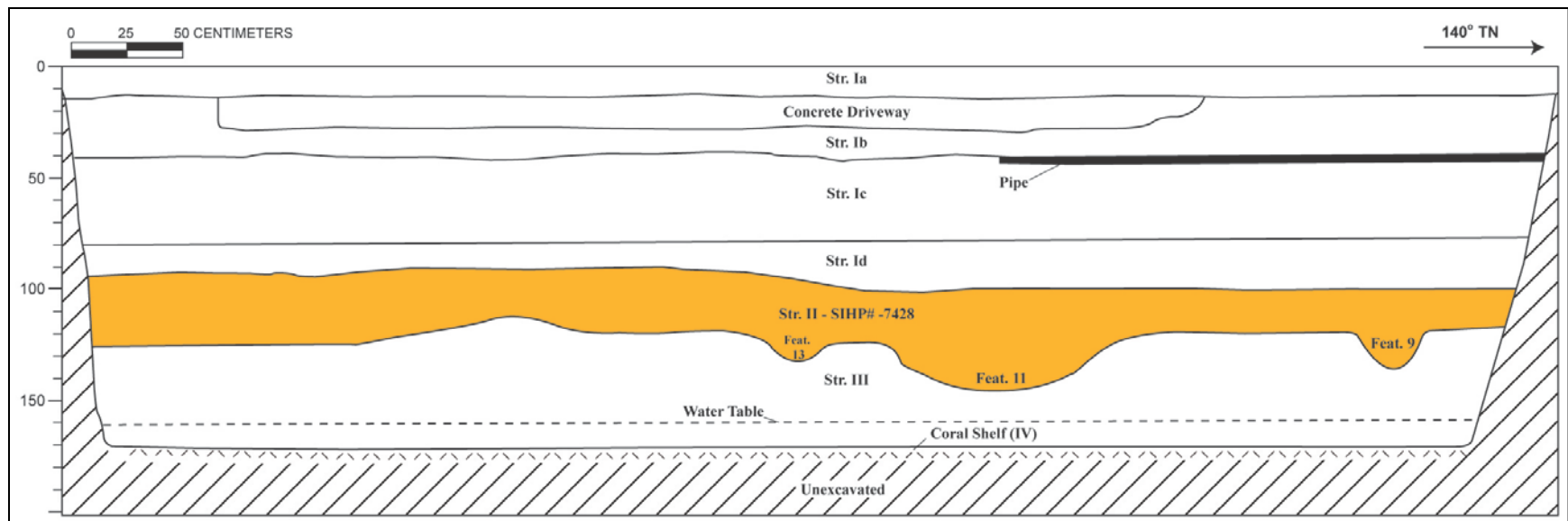


Figure 375. T-120A northeast wall profile

Table 80. T-120A Stratigraphic Description, northeast wall

Stratum	Depth (cmbs)	Description
Ia	0–15	Asphalt; fill
Ib	15–40	Fill; 10 YR 7/4 (very pale brown); very gravelly sandy loam; medium, crumb structure; moist, loose, weak consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, fine roots; coral gravel, large coral cobbles, very gravelly sandy loam
Ic	40–80	Fill; 10 YR 7/4 (very pale brown); very gravelly loamy sand; structureless, single-grain; weak, fine, medium, granular structure; moist, loose, weak consistency; non-plastic; mixed origin; clear, smooth lower boundary; common, fine roots; coral gravel, large coral cobbles, very gravelly loamy sand
Id	80–100	Fill; 10 YR 2/2 (very dark brown); gravelly loamy sand; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; bulk sample contained faunal, midden, charcoal (collected)
II	90–125	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; common, fine roots; bulk and/or screened samples contained bovine, glass, marine mollusk shell, <i>Mytilidae</i> , <i>Neritidae</i> , <i>Tellinidae</i> (collected); contains five pit features (Features 9-13) designated as components of SIHP #-7428
SIHP #-7428 Feature 9	118–136	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; pit feature; sample contained charcoal, marine shell midden, and naturally-occurring marine shell; SIHP #-7428 Feature 9
SIHP #-7428 Feature 10	128–137	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; pit feature; sample contained charcoal, marine shell midden, <i>kukui</i> nutshell, and fish bone; SIHP #-7428 Feature 10
SIHP #-7428 Feature 11	130–140	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; pit feature; sample contained charcoal, marine shell midden, glass fragments, one white ceramic fragment, one basalt water-worn cobble, medium mammal bone, one shark tooth, and naturally-occurring marine shell; SIHP #-7428 Feature 11
SIHP #-7428 Feature 12	128–132	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; pit feature; sample contained charcoal, marine shell midden, one piece of volcanic glass debitage, fire-cracked rock, and naturally-occurring marine shell; SIHP #-7428 Feature 12

Stratum	Depth (cmbs)	Description
SIHP #-7428 Feature 13	128–132	Natural; 10 YR 2/2 (very dark brown); gravelly sandy loam; structureless, single-grain; moist, friable consistency; non-plastic; mixed origin; pit feature; sample contained charcoal and marine shell midden; SIHP #-7428 Feature 13
III	125–170	Natural; 10 YR 5/4 (yellowish brown); sand; structureless, single-grain; moist, friable consistency; non-plastic; marine origin; abrupt, smooth lower boundary
IV	170 (BOE)	Natural; 10 YR 7/4 (very pale brown); bedrock-limestone; structureless, massive; moist, weakly to strongly cemented; discontinuous consistency; non-plastic; marine origin; lower boundary not observed; Pleistocene coral shelf



excavation sidewall. The sediment matrix within the feature gravelly sandy loam with similar characteristics to Stratum II. A 1-liter bulk sample collected from the pit yielded charcoal (0.1 g) and marine shell midden (1.0 g). SIHP #-7428 Feature 13 is interpreted as a pit of indeterminate function.

The buried A-horizon (Stratum II; SIHP #-7428) has been capped by layers of locally-procured and imported fill, and the modern asphalt road and cement sidewalk, all of which have been sub-designated under Stratum I. The fill sediments that cap the former land surface are considered to be late-nineteenth century to modern deposits related to land reclamation, grading, and the construction of Halekauwila Street.

The buried culturally-enriched A-horizon (SIHP #-7428) identified in T-119, T-119A, T-120, T-120A, and T-120B contained both traditional Hawaiian and post-Contact cultural material, vertebrate and invertebrate faunal material, and charcoal.

Traditional cultural material within the buried culturally-enriched A-horizon (SIHP #-7428) included a single slingstone (Acc. # 119A-H-1; Figure 376) within T-119A, two volcanic glass flakes (120A-H-1, H-2) within T-120A, and two basalt flakes and one volcanic glass flake (120B-H-1 to H-3) within T-120B. Energy-Dispersive X-ray Fluorescence (EDXRF) analysis of the volcanic glass flakes indicates that these fragments are from a local O'ahu provenance.

Historic cultural material within the buried culturally-enriched A-horizon included historic glass bottle fragments (21 total), dated between 1800 and 1920, ceramics, and other miscellaneous artifacts (Table 81).

Vertebrate faunal remains were collected from the buried culturally-enriched A-horizon (Stratum II) and SIHP #-7428 Features 1a, 2, 3, 4, 5, 6, 7, 8, 10, and 11. In general, the faunal remains that were collected were either unmodified, or they exhibited evidence of butchering (i.e. metal saw blade). The faunal remains consist of *Canis lupus familiaris*, *Bos taurus*, *Sus scrofa*, *Equus ferus caballus*, and several varieties of fish. Several of the *Bos Taurus* and *Sus scrofa* elements display evidence of butchering with a metal saw blade. This particular butchering practice is specific to the historic time period. Horses (*Equus ferus caballus*) were not introduced to Hawai'i until the early 1800s.

Invertebrate faunal remains were predominately collected from screened and bulk sediment samples of the buried culturally-enriched A-horizon. Invertebrate fauna included naturally-occurring shell and shell midden similar in quantity and taxa to the naturally-occurring shell and shell midden described within SIHP #-7428 Features 2, 3, 5, and 7-13.

Wood taxa analysis on select charcoal fragments from SIHP #-7428 Features 1a, 4, 5, 7, 9, 10, and 12 identified 19 species of trees and shrubs including 14 native species, 3 Polynesian-introduced species, and 2 historically-introduced species (see Table 76). While the analysis indicated a predominance of native and Polynesian-introduced species, the presence of historically-introduced species reflects the continued use or occupation of the buried A-horizon (SIHP #-7428) during the post-Contact era. Radiocarbon results of taxa-identified charcoal fragments include date ranges that span from the pre-Contact to the mid-twentieth century (see Table 76).

SIHP #-7428 is a buried, culturally-enriched A-horizon and 14 associated archaeological features. Twelve of these features (SIHP #-7428 Features 2–13) consist of 3 postmolds, and 9



Figure 376. Photograph of slingstone (Acc. # 119A-H-1) collected from Stratum IIa in T-119A

Table 81. Historic Cultural Material Identified From SIHP #-7428

Acc. #	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
119A-A-1	T-119A, SIHP #-7428 Feature 1a	Flatware -plate or dish	Body and rim	2	Porcelain	Chinese	“Om” motif, blue painted underglaze; two blue bands (int.)
119A-A-2	T-119A, SIHP #-7428 Feature 1a	Flatware -plate or dish	Base	1	Porcelain	Chinese	“Allah” motif, blue painted underglaze
119A-A-3	T-119A, SIHP #-7428 St. IIa	Hollowware - rice bowl	Body	1	Porcelain	Asian, probably Japanese	Asian style, blue floral exterior design
Acc. #	Prov.	Misc. Type	Portion	No.	Material	Origin; Age	Comments
119A-A-6	T-119A, SIHP #-7428 Feature 1a	Tag	Complete	1	Metal	Post-1908	Thin oval metal plate with two holes; has a picture of a carriage and “FISHER” (post-1908)
119A-A-7	T-119A, SIHP #-7428 St. IIa	Cobble	Complete	1	Stone	-	Waterworn cobble, tabular, polished; possible cobblestone or ballast stone?
119A-A-8	T-119A, SIHP #-7428 St. IIa	Pebble, rounded	Complete	1	Stone	-	Waterworn pebble, unpolished, round

Acc. #	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
119A-A-9	T-119A, SIHP #- 7428 St. IIa	Pebble, rounded	Complete	1	Stone	-	Waterworn pebble, slightly polished, oblate
119A-A-10	T-119A, SIHP #- 7428 St. IIa	Stone/ Marble mass	Fragment	1	Stone	-	-
120A-A-1	T-120A, SIHP #- 7428 Feature 11	Glass, worked	Fragment	1	Glass	Post-1870	Glass chipped for cutting edge; clear glass; post- 1870



indeterminate pits. The other two were identified in T-119 and T-119A and consist of a basalt stone and mortar wall (SIHP #-7428 Feature 1) with an associated builder's trench (SIHP #-7428 Feature 1a). SIHP #-7428 contained both traditional Hawaiian and post-Contact cultural material, vertebrate and invertebrate faunal material, and charcoal. Laboratory analysis of the material collected from SIHP #-7428 indicated that the former land surface was utilized from the pre-and/or early post-Contact period to the mid-twentieth century, prior to being capped by historic fill deposits.

Based on the guidance of the National Register Bulletin No.15, SIHP #50-80-14-7428 retains its integrity of location, design, materials, and workmanship. Based on the results of this investigation, CSH recommends that this cultural resource maintains sufficient integrity to support its historic significance under Criterion D (has yielded, or is likely to yield information important for research on prehistory or history) of the Hawai'i and the National Registers, exclusively for its information potential.

SIHP #50-80-14-7428 has provided information, and can potentially provide additional information, on late pre- to early post-Contact habitation and historic land use within Kaka'ako. The potential for additional research warrants the implementation of a data recovery program. Data recovery at SIHP #-7428 will focus on data collection from the buried, culturally-enriched sandy loam A-horizon and associated features, and any discrete features within fill layers, such as wall remnants. It also will include a more intensive regime of strata- and feature-specific radiocarbon, palynological, and botanical analyses to further clarify use and function of the culturally-enriched strata and features, and to temporally distinguish between traditional Hawaiian versus historic deposition. Following the data recovery program, archaeological monitoring program will be conducted to collect further data on the nature, content, sequence, and extent of SIHP #50-80-14-7428.

**5.3.17 SIHP #50-80-14-7429**

<b>FORMAL TYPE:</b>	Subsurface cultural deposit, human skeletal element
<b>FUNCTION:</b>	Habitation
<b>PREVIOUS DOCUMENTATION:</b>	N/A
<b>AGE:</b>	Undetermined, potentially pre- and post-Contact
<b>NUMBER OF FEATURES:</b>	7
<b>TYPES OF FEATURES:</b>	6 pits (2 possible postmolds, 4 indeterminate) and 1 human skeletal element
<b>DISTRIBUTION:</b>	0.05 acres (total area)
<b>LOCATION:</b>	Located near the corner of Ward Avenue and Queen Street (Kewalo Geographic Zone)
<b>TAX MAP KEY:</b>	TMK [1] 2-3-002:059 and 001
<b>LAND JURISDICTION:</b>	Victoria Ward Ltd.
<b>TEST EXCAVATIONS:</b>	T-167, T-168, T-168A, T-168B, T-169, T-170, and T-170A

SIHP #50-80-14-7429 is a newly-identified subsurface cultural deposit (A horizon) and seven associated features identified in the Ross Dress for Less store parking lot and adjacent throughway parking lot near the intersection of Ward Avenue and Queen Street (Figure 377 and Figure 378). This archaeological cultural resource was identified in the Kewalo Geographic Zone during the current City Center archaeological inventory survey.

The buried, culturally-enriched A-horizon containing seven archaeological features was identified in seven test excavations (T-167, T-168, T-168A, T-168B, T-169, T-170, and T-170A). The features consist of six pits and one isolated human cranial fragment.

The depositional sequence in each of the seven test excavations was generally similar (Figure 379). The buried Late Pleistocene calcareous reef (coral shelf) was reached in T-168A and T-168B and is presumed to be beneath the water table and base of excavation within T-167, T-168, T-169, T-170, and T-170A. The coral shelf was overlain by natural gleyed marine sand at the water table in T-168, T-170, and T-170A.

Natural calcareous sand, termed Jaucas sand and designated Stratum III, was present at the base of excavation in each of the seven test excavations and overlying the coral shelf and gleyed sediments in T-168, T-168A, T-168B, T-170, and T-170A.

The buried culturally-enriched silty sand or loamy sand A-horizon (SIHP # -7429), exhibited both pre- and post-Contact land usage, and was designated Stratum II. It overlies the natural Jaucas sand surface in all seven test excavations. The six pit features (Features 1–5 and 7) originated from the A-horizon and were observed to be intrusive into the underlying Jaucas sand. Two pit features were interpreted as possible postmolds (Features 2 and 4), while the other four pits (Features 1, 3, 5, and 7) were of indeterminate function. Feature 6, an isolated human cranial fragment, was identified in T-170 within the buried A-horizon; no pit outline was evident.

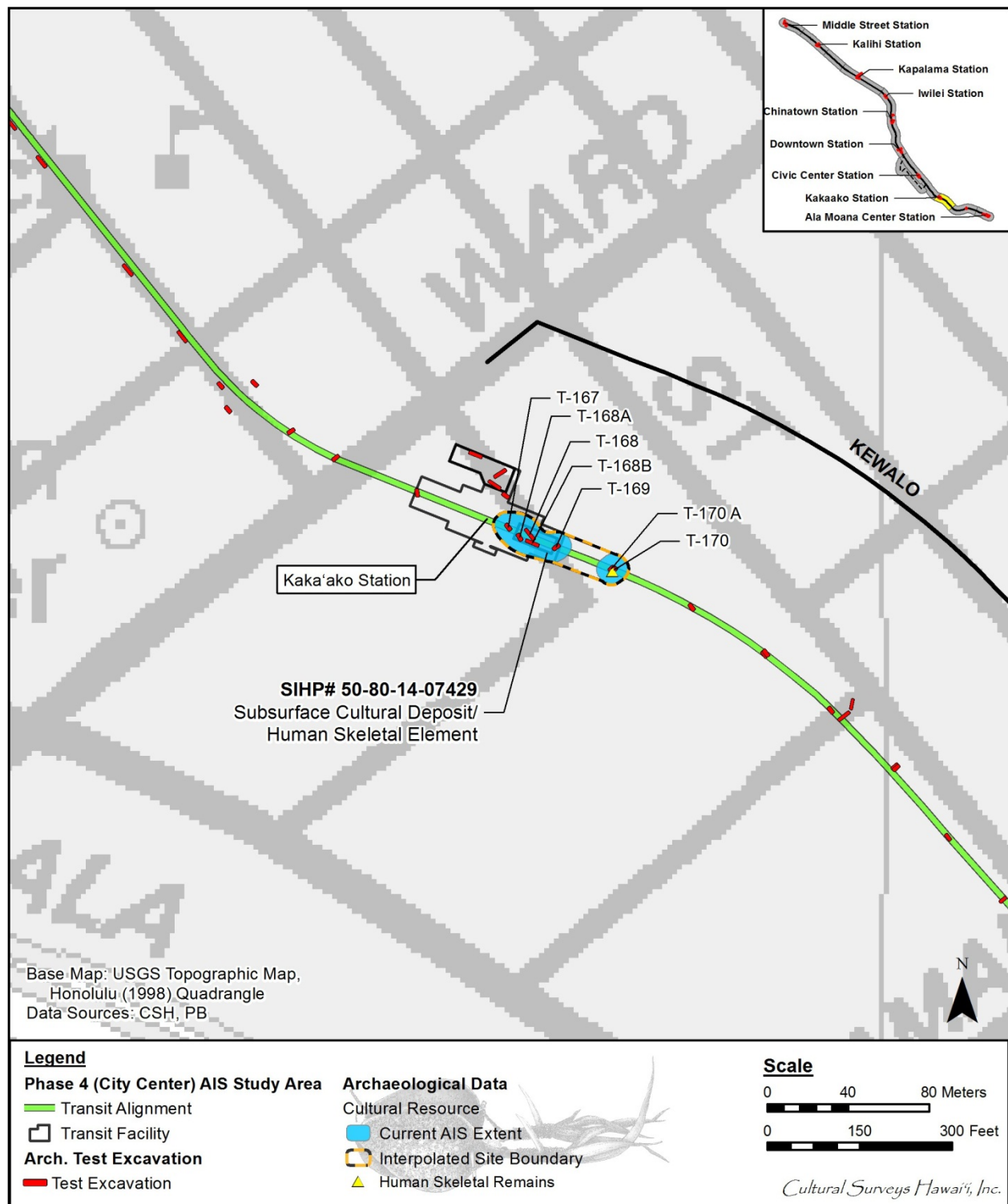
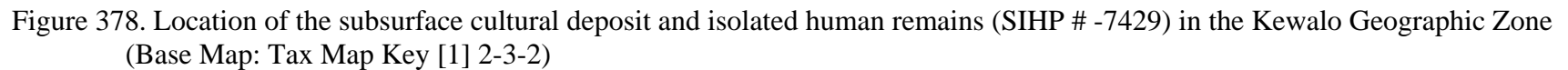


Figure 377. Location of the subsurface cultural deposits (SIHP # -7429) in the Kewalo Geographic Zone (Base Map: 1998 USGS Topographic Map of Honolulu)





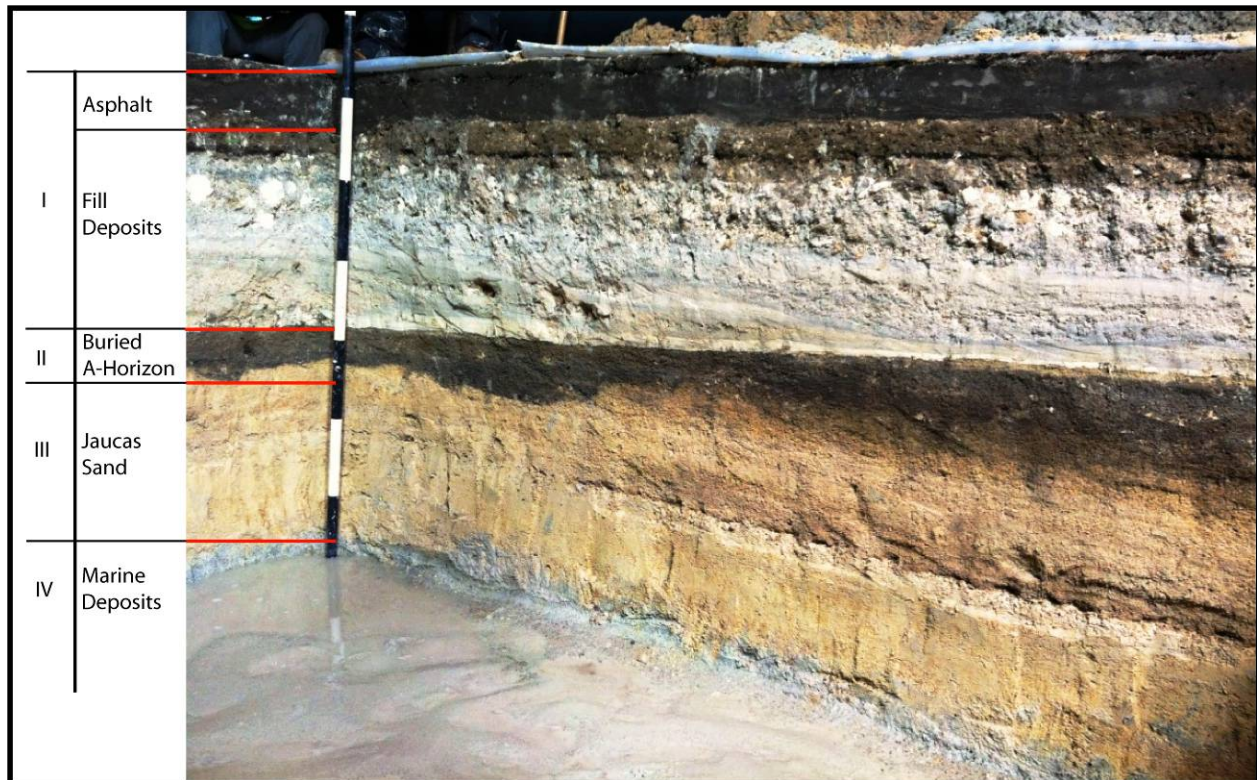


Figure 379. T-170A northwest wall profile, showing the general depositional sequence observed in the vicinity, including the buried culturally-enriched sand A-horizon (SIHP # -7429), view to west

## T-170A Stratigraphic Description

Stratum	Depth (cmbs)	Description
Ia	0-15	Asphalt
Ib	12-25	Fill; 10 YR 3/3 (dark brown); very gravelly loam; weak, fine, crumb structure; moist, friable consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; basalt base course
Ic	25-30	Fill; 10 YR 8/2 (very pale brown); extremely gravelly sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; crushed coral fill
Id	30-52	Fill; 10 YR 7/2 (light gray); very fine sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary
II	52-60	Natural, 10 YR 4/2 (dark grayish brown); silty sand; structureless, single-grain; moist, loose consistency; non-plastic; diffuse, smooth lower boundary; buried A-horizon; contained glass, marine shells, and faunal bone (collected); SIHP #-50-80-14-7429; contains Feature 7
SIHP #-7429 Feature 7	56-60	Pit feature originating in Stratum II; silty sand; contained marine shell midden, fish bone, faunal remains, fire-cracked rock, and glass fragments; SIHP #-7429 Feature 7
III	60-123	Natural; 10 YR 7/4 (very pale brown); medium to coarse grain sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; diffuse, smooth lower boundary; natural Jaucas sand
IV	123-132 (BOE)	Natural; GLEY 1 5GY 7/1 (light greenish gray); coarse sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; lower boundary not visible; natural marine sand

**SIHP #-7429 Feature 1** was identified within T-167 at or near the base of Stratum II at 1.40 mbs. The pit was intrusive into Stratum III where it terminated at 1.45 mbs. The feature was irregularly shaped in plan view and measured a over 0.94 m long and 0.87 m wide. It was observed at the northwestern end of the excavation and extended beyond the excavation sidewalls (Figure 380). The sediment matrix within the pit was silty sand with similar characteristics to Stratum II. An osseous fragment from a medium mammal was collected from during excavation. A 4-gallon bulk sediment sample collected from within the pit was screened and yielded charcoal (0.2 g), *Nerita picea* (1.9 g), possibly burned crustacean (0.7 g), naturally-occurring, water-rounded marine shell (non-midden) (0.8 g), and a metal fragment (0.4 g). SIHP #-7429 Feature 1 is interpreted as a pit of indeterminate function.

**SIHP #-7429 Feature 2** was identified within T-167 at or near the base of Stratum II at 1.41 mbs. The pit was intrusive into Stratum III where it terminated at 1.49 mbs. The feature was ovoid in plan view, measured 0.32 m long and over 0.15 m wide, and extended into the south sidewall (see Figure 380). The sediment matrix with the pit was silty sand with similar characteristics to Stratum II. Burned osseous fragments from an unidentified medium mammal were collected from Feature 2 during excavation. A 1.5 gallon screened bulk sediment sample from SIHP #-7429 Feature 2. It contained charcoal (0.3 g), naturally-occurring, water-rounded marine shell (2.8 g), rusted metal fragments (4.1 g), and fish bone (0.1 g). SIHP #-7429 Feature 2 is interpreted as a possible postmold.

**SIHP #-7429 Feature 3** was identified within T-167 at or near the base of Stratum II at 1.32 mbs. The pit was intrusive into Stratum III where it terminated at 1.48 mbs. The feature was roughly rectangular in plan view. It measured over 0.95 m long and over 0.64 m wide and extended into the south and southeast sidewalls (Figure 381). The sediment matrix within the pit was silty sand with similar characteristics to Stratum II. Burned osseous fragments from an unidentified medium mammal and *Sus scrofa* (pig) were collected from the upper portion of SIHP #-7429 Feature 3 during excavation. One of the fragments, a pig rib, also exhibited cut marks characteristic of butchering. Two glass insulator fragments also were collected from the upper portion of the pit feature during excavation. The insulator was embossed with a “B” referring to Bushwick/Brookfield Glass Works, which was in operation from 1864-1921 (Whitten 2013). A canine tooth from a *Canis lupus familiaris* (dog) with a drilled hole through the end of the root (Acc. # 167-H-1) was discovered near the faunal remains and glass fragments. The drilled tooth is considered a Traditional Hawaiian artifact and may have been part of a dog tooth necklace (*lei ‘ilio*) or leg ornament (*kupe‘e niho ‘ilio*). A 12-gallon screened bulk sediment sample collected from within the pit yielded charcoal (0.2 g), rusted metal fragments (4.1g), an unidentified fish bone (0.1 g), unidentified medium mammal bone (0.3 g), and marine shell midden consisting of *Nerita picea* (4.7 g), Isognomidae (1.2 g), *Isognomon* sp. (0.3 g), burned *Conus* sp. (0.9 g), *Strombus* sp. (0.3 g), Mitridae (0.3 g), crustacean (2.2 g), Echinoidea spp. (1.7), and *Brachidontes crebristriatus* (1.3 g). The charcoal collected from Feature 3 was submitted for wood taxa analysis identified cf. Conifer (pine, fir), a historically-introduced tree, as well as cf. *Metrosideros polymorpha* (*‘ōhi‘a lehua*), a native tree, and four unidentified species. The contents of Feature 3 indicate post-Contact influence. SIHP #-7429 Feature 3 is interpreted as a pit of indeterminate function.

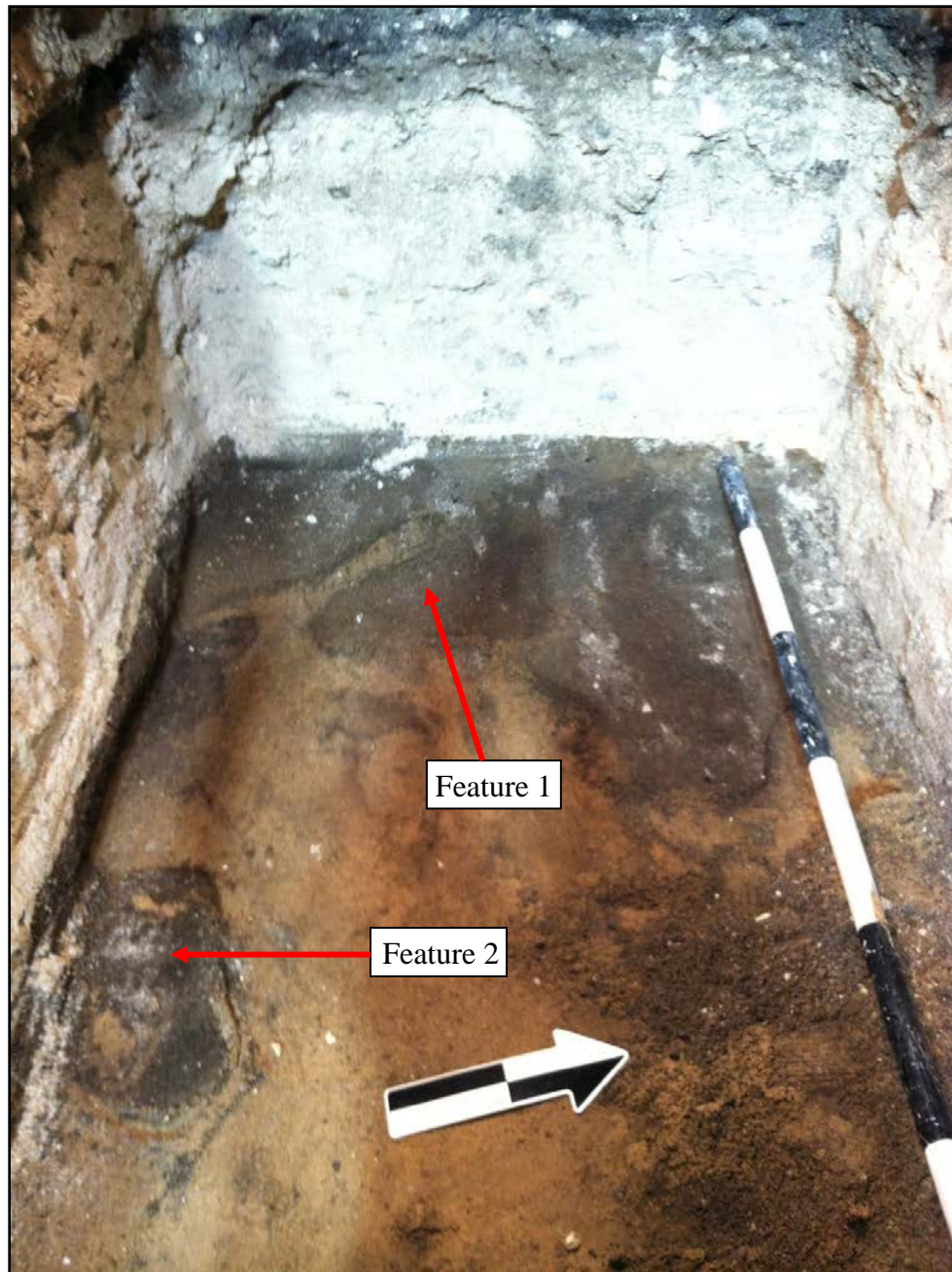


Figure 380. T-167 interface of Strata II/III, showing SIHP # -7429 Features 1 and 2, view to northwest



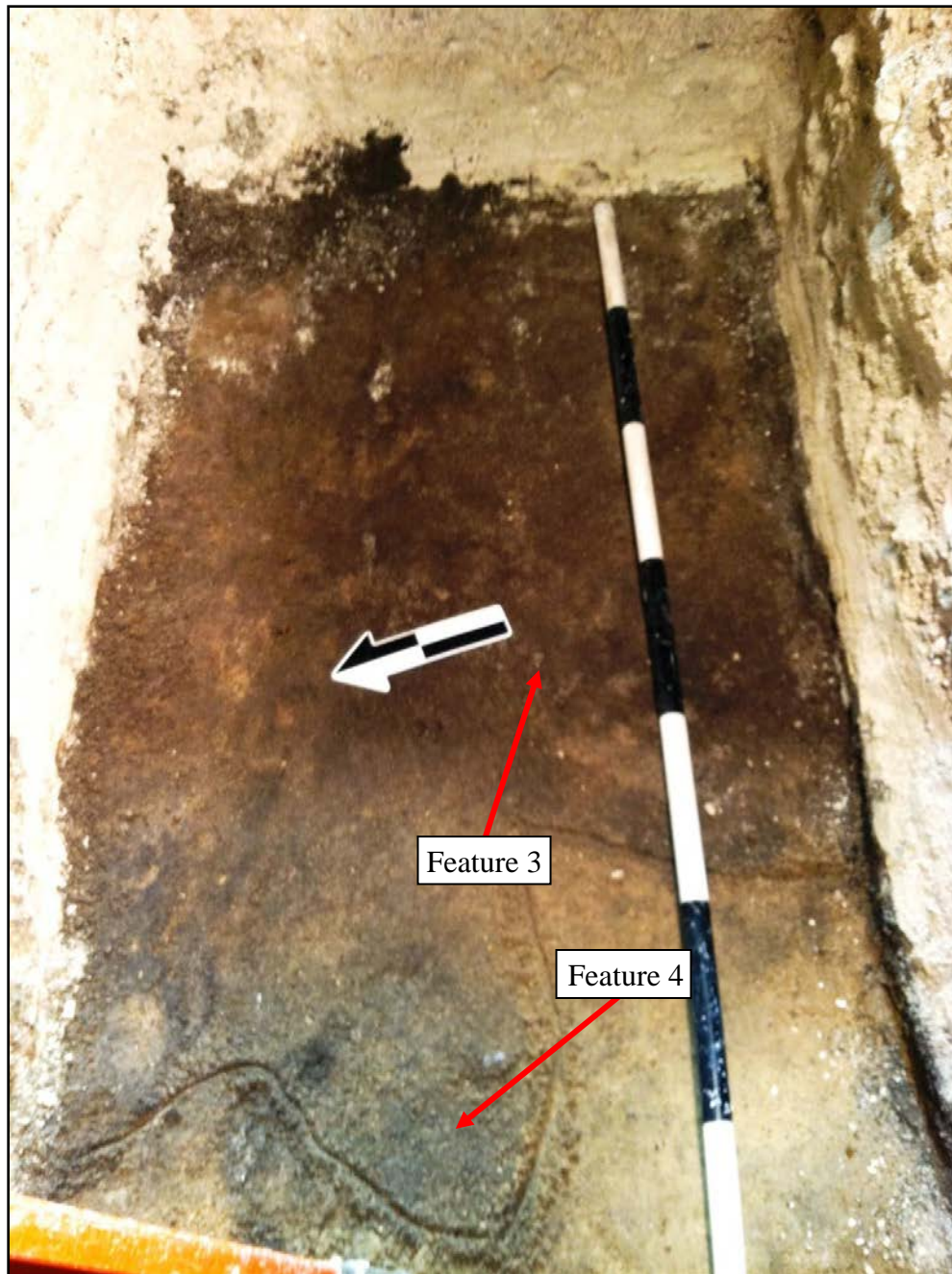


Figure 381. T-167 interface of Strata II/III, showing SIHP # -7429 Features 3 and 4, view to southeast

**SIHP #-7429 Feature 4** was identified within the central portion of T-167, originating from the base of Stratum II at 1.54 mbs and terminating at 1.66 mbs within Stratum III. This pit was mostly circular in plan view and measured 0.31 m long and 0.28 m wide (see Figure 381). The sediment matrix within the feature was silty sand with similar characteristics to Stratum II. No bulk sample was collected, and no artifacts or faunal remains were observed, during the excavation of the feature. SIHP #-7429 Feature 4 is interpreted as a possible postmold.

**SIHP #-7429 Feature 5** was identified in the western portion of T-168B, originating from the base of Stratum II at 1.50 mbs and terminating at 1.65 mbs within Stratum III. This pit was ovoid in plan view, measured over 0.60 m long and 0.30 m wide, and extended into the south sidewall (Figure 382). The sediment matrix within the feature was loamy sand with similar characteristics to Stratum II. SIHP #-7429 Feature 5 contained a noticeable deposit of charcoal flecking. A 4-liter bulk sediment sample and a 3-gallon screened sediment sample collected from SIHP #-7429 yielded charcoal (43.2 g), various shell midden (5.4 g), various non-cultural shell (2.5 g), rusted metal (3.0 g), *Rattus* sp. (rat) bone (0.1 g), and fire-cracked rock (43.1 g), and possible marine shell midden. The possible marine shell midden included crustacean (1.6 g), *Nerita picea* (1.5 g), *Isognomon* sp. (1.4 g), Echinoidea (0.2 g), *Ctena bella* (0.1 g), *Brachidontes crebristriatus* (0.1 g), and *Strombus* sp. (0.5 g). A sample of charcoal (4.2 g) was submitted for wood taxa analysis and identified as cf. *Metrosideros polymorpha* ('ōhi'a lehua) and conifer (i.e., pine, fir, or other cone-bearing variety). SIHP #-7429 Feature 5 is interpreted as a pit of indeterminate function.

**SIHP #-7429 Feature 6** was identified in T-170. Feature 6 consists of a single isolated human cranial fragment, identified as a left temporal bone portion, including the mastoid process and the root of the zygomatic arch. The previously-disturbed human cranial fragment was discovered in situ within the buried A-horizon (Stratum II) near the southern end of the southeast sidewall and at 0.65 mbs (Figure 383). A limited investigation was performed by an osteologist to identify the remains discovered in situ, and no additional human remains were detected. The fracture margins of the fragment were of similar color as the adjacent bone, which indicates that the temporal portion was not fractured recently. The mastoid process was notably gracile which suggests a possible female or young adult individual. An assessment of ancestry was indeterminate due to the lack of supporting traits. SIHP #-7429 Feature 6 is interpreted as a human skeletal fragment.

**SIHP #-7429 Feature 7** was identified in T-170A, originating within Stratum II at 0.56 mbs and terminating at 0.60 mbs near the base of Stratum II. Feature 7 was mostly square shaped in plan view and measured 0.35 m long and 0.25 m wide (Figure 384). The sediment matrix of discovered SIHP #-7429 Feature 7 was silty sand with similar characteristics to Stratum II. A 2-liter screened bulk sediment sample yielded various shell midden (13.5 g), bottle glass fragments (0.3 g), a fish spine (0.1 g), and fire-cracked rock (25.8 g). The shell midden was identified as *Strombus* sp. (8.5 g), *Nerita picea* (2.6 g), burned *Natica* sp. (2.0 g), burned crustacean (0.3 g), and *Isognomon* sp. (0.1 g). Faunal remains from the screened bulk sediment sample were identified as *Canis lupus familiaris* (dog), *Rattus* sp. (rat), and an unknown medium mammal, not consistent with human. The presence of historic material indicates post-Contact influence to the feature. SIHP #-7429 Feature 7 is interpreted as a pit of indeterminate function.

Detailed information regarding the location, type, function and content of each archaeological feature is provided in Table 82. No radiocarbon dating analysis was performed on the contents from SIHP #-7429.



Figure 382. T-168B interface of Strata II/III, showing SIHP # -7429 Feature 5; note charcoal flecking within feature, view to southeast

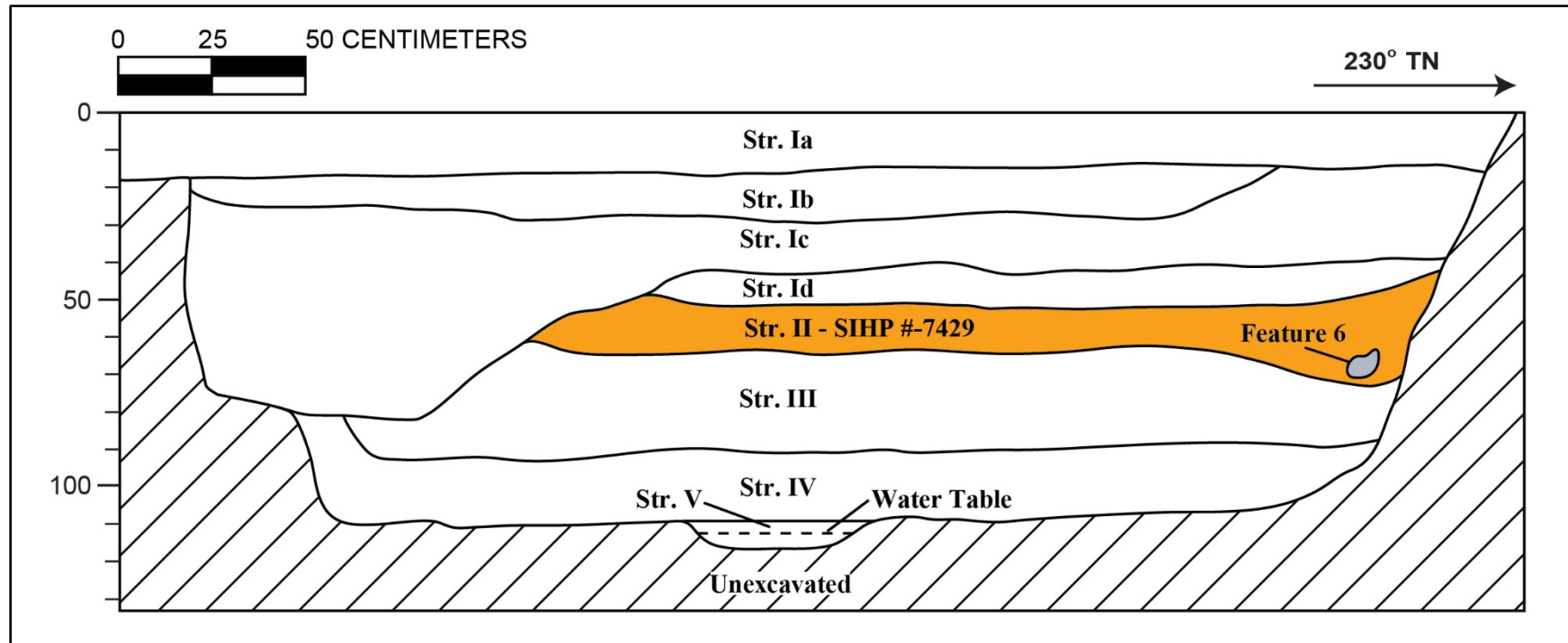


Figure 383. T-170 southeast wall profile, showing the location of SIHP # -7429 Feature 6, human cranial fragment





Figure 384. T-170A interface of Strata II/III, showing SIHP # -7429 Feature 7 (outlined), view to northeast

Table 82. Archaeological Features of SIHP # -7429 Identified during the City Center Section 4 AIS

Feature	Test Excavation	Depth (cmbs)	Type/Function	Contents
1	T-167	140-145	Pit/Indeterminate	<i>Nerita picea</i> shell, burned crustacean, non-cultural shell, a metal fragment, a single fragmentary medium mammal skeletal element
2	T-167	141-149	Pit/Possible postmold	Burned osseous fragments from an unidentified medium mammal, naturally-occurring, water-rounded marine shell, rusted metal fragments, and fish bone
3	T-167	140-148	Pit/Indeterminate	Drilled <i>Canis lupus familiaris</i> tooth, burned osseous fragments from an unidentified medium mammal and a <i>Sus scrofa</i> , also a butchered pig rib, Bushwick/Brookfield Glass Works glass insulator (1864-1921), charcoal (native 'ōhi 'a lehua and conifer), shell midden, rusted metal fragments, and an unidentified fish bone
4	T-167	140-166	Pit/Possible postmold	Possible postmold
5	T-168B	150-165	Pit/Indeterminate	Charcoal (native 'ōhi 'a lehua and conifer), shell midden, non-cultural shell, rusted metal, <i>Rattus</i> sp., and fire-cracked rock
6	T-170	65-71	Isolated human remains	Isolated human cranial fragment identified as a left temporal portion including the mastoid process and root of the zygomatic arch. Gracile mastoid process indicates possible female or young adult. No pit outline
7	T-170A	56-60	Pit/Indeterminate	Shell midden, bottle glass fragments, a fish spine, fire-cracked rock, and faunal remains from a <i>Canis lupus familiaris</i> , <i>Rattus</i> sp., and unknown medium mammal

The buried A-horizon has been capped by layers of locally-procured and imported fill, base course, and the modern asphalt surface of the Ross Dress for Less store and throughway parking lots, all of which have been sub-designated under Stratum I. The fill sediments that cap the former land surface are considered to be late nineteenth century to modern deposits related to land reclamation, grading, and the construction of the parking lots.

The buried A-horizon (SIHP # -7429) identified in T-167, T-168, T-168A, T-168B, T-169, T-170, and T-170A contained both Traditional Hawaiian and post-Contact cultural material, human skeletal remains, vertebrate and invertebrate faunal material, and charcoal.

Historic cultural material within the buried culturally-enriched A-horizon of SIHP # -7429 was collected from four test excavations. A bulk sediment sample of Stratum II/III from T-167 included a bottle glass and rusted metal fragment. Bulk sediment samples of Stratum II from T-168 included metal fragments and a nail, a small blue glass bead, and a glass fragment. A bulk sediment sample of Stratum II from T-168B included large rusted metal fragments and bottle glass fragments. Stratum II from T-169 contained one glass marble, three clay marbles, a piece of worked glass, and corroded metal and glass fragments. A bulk sediment sample of Stratum II from T-170A contained a refined earthenware ceramic fragment, metal fragments, and bottle glass fragments. A single canine tooth of a dog (*Canis lupus familiaris*) with a drilled hole through the end of the root (Acc. #167-H-1) was collected from SIHP #-7429 Feature 3 (Figure 385). The tooth may have been part of a dog tooth necklace (*lei 'ilio*) or leg ornament (*kupe'e niho 'ilio*). The drilled dog tooth was found near faunal remains and a Bushwick/Drookfield Glass Works glass insulator dating around 1864-1921. Historic artifacts collected from five of the pit features included metal fragments from SIHP #-7429 Features 1-3 and 5, and bottle glass fragments from Feature 7.

Human skeletal remains were encountered within the culturally-enriched A-horizon (SIHP # -7429) in T-170. They were identified between 0.65 mbs and 0.71 mbs. The human skeletal remains were identified as an isolated left temporal bone portion within Stratum II. No pit outline was present. The fracture margins indicated that the fragmentation of the portion had not been recent and was likely a result of previous disturbance. The gracile size of the mastoid process on the temporal bone suggests it was from a female or young adult. An assessment of ancestry was indeterminate. SIHP #-7429 Feature 6 was preserved in situ.

Vertebrate faunal remains were collected from the buried culturally-enriched A-horizon from T-168B, T-169, and T-170A and from SIHP #-7429 Features 2, 3, and 7. In general, the faunal remains include unmodified, burned, and/or butchered fragments (i.e., exhibited characteristic cut marks). Faunal remains collected from the buried A-horizon included *Bos taurus* (cow), *Sus scrofa* (pig), *Canis lupus familiaris* (dog), *Rattus* sp.(rat), as well as unidentified medium mammal fragments possibly from *Ovis aries* (sheep) or *Felis catus* (cat), and unidentified fish remains. Faunal remains from SIHP #-7429 Features 2, 3, and 7 included *Sus scrofa*, *Canis lupus familiaris*, *Rattus* sp., and several unidentified medium mammal fragments, in addition to unidentified fish remains.

Invertebrate faunal remains were predominately collected from screened and bulk sediment samples of the buried SIHP #-7429 culturally-enriched A-horizon and associated features. Invertebrate fauna included non-cultural shell and shell midden (see Table 82).



Figure 385. Drilled dog tooth (Acc. #167-H-1) (obverse and reverse) that may have been part of a dog tooth necklace (*lei 'ilio*) or part of a dog tooth leg ornament (*kupe'e niho 'ilio*), collected from the buried culturally-enriched A-horizon (SIHP # -7429) of T-167, scale blocks are in cm



SIHP # 50-80-14-7429 is a newly-identified subsurface cultural deposit. SIHP # -7429 includes a buried, culturally-enriched silty sand/loamy sand A-horizon containing seven archaeological features (Features 1 to 7). Two pit features were interpreted as possible postmolds (SIHP #-7429 Features 2 and 4), four pit features were of indeterminate function (SIHP #-7429 Features 1, 3, 5, and 7), and one feature consisted of an isolated human cranial fragment (SIHP #-7429 Feature 6). SIHP # -7429 contained both traditional and post-Contact cultural material, human skeletal remains, vertebrate and invertebrate faunal material, and charcoal. Laboratory analysis of material collected from SIHP # -7429 indicates that the former land surface was likely utilized from the pre- and/or early post-Contact period to the early twentieth century, prior to being capped by historic fill deposits.

Background research indicates that the coastal lands of Kewalo were sparsely populated during the pre- and early-post Contact time periods. This coastal area largely consisted of wetlands that were utilized for aquaculture, salt pans, occasional taro *lo'i*, and habitation. Many of the Kewalo wetlands were reclaimed for urban development during the late nineteenth century.

Based on the guidance of the National Register Bulletin No. 15, SIHP # 50-80-14-7429 retains its integrity of location, design, and materials. Based on the results of this investigation, CSH recommends that this cultural resource maintains the integrity to support its historic significance under Criterion D (has yielded, or is likely to yield, information important for research on prehistory or history) and E (has cultural significance to an ethnic group) of the Hawai'i Register, and Criterion D of the National Register, exclusively for its information potential.

SIHP #50-80-14-7429 has provided information, and can potentially provide additional information, on late pre- to early post-Contact habitation, historic land use, and pre- and post-Contact burial practices and distribution within Kaka'ako. The potential for additional research warrants the implementation of a data recovery program focusing on data collection from the buried, culturally-enriched A-horizon and associated features. Additionally, discrete features within fill layers will be identified and documented. Data recovery will include a more intensive regime of strata- and feature-specific radiocarbon, palynological, and botanical analysis. The analysis will seek to indicate use, function, and potentially the geographic distribution/extent of culturally-enriched strata and features, and attempt to temporally categorize subsurface deposits to distinguish between traditional Hawaiian versus historic deposition. Data recovery will also seek to identify additional burials or human skeletal remains that may be present within SIHP # -7429. Data recovery will include detailed stratigraphic documentation of identified burial pits or human skeletal remains. Following data recovery, archaeological monitoring will be conducted to further recover data on the depositional sequence and extent of SIHP # -7429 through documentation and sample collection. The previously-identified human remain associated with SIHP # -7429, will be treated in accordance with HAR §13-300 and HRS Chapter 6E-43. In order to alleviate the project's effect on human burials, a project-specific burial treatment plan (a requirement of HAR §13-300) will be prepared for consideration of the OIBC and recognized descendants. The agreed-upon treatment is preservation in place, the details of which will be documented in the burial treatment plan.